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ORIGINAL ARTICLES.

THE PRESENT STATUS AND CLAIMS OF ELECTRICITY IN GYNECOLOGY.

BY G. BETTON MASSEY, M.D.,
OF PHILADELPHIA.

TRIPIER, of France, the father of electro-therapy in the diseases of women, writing first in 1859, initiated a movement that failed to attract the attention of the profession until the genius, patience, and perseverance of his pupil, Apostoli, imperatively commanded an audience. Making his first contributions upon the subject in 1881, the latter soon extended the claims of his teacher beyond the value of faradic currents in the puerperal condition and in displacements, and promulgated that series of essays on his method of treating fibroid tumors of the uterus that soon made it a familiar subject throughout the scientific world. The first of these communications was made in 1884, and was soon followed by corroborative reports from other observers in many lands and in many languages; but it was followed also, as a natural consequence, by fierce attacks from the surgeons who had but just begun those bloody experiments that have not yet overthrown the earlier dictum enjoining the non-removal of these growths.

The controversy thus provoked became warm, but lost much of its fervor when distinguished English surgeons—such as the Keiths and Sir Spencer Wells—ranged themselves on the side of the electro-therapeutists. The method could not fail to be largely adopted when advocated by such an one as the elder Keith, who himself possesses a still unrivalled record in the surgical removal of fibroid tumors. Hastily adopted by many gynecologists, some of whom were profoundly ignorant of the most rudimentary knowledge of the proper mode of handling so subtle an agent as electric force, the progress of the remedy in this affection has yet steadily advanced toward the realm of fixed facts, enshrined in a bewildering abundance of contributions to the journals. In America alone the stimulus thus given to the electric treatment of fibroids and other affections of women has already resulted in the production of four treatises in book form,[1] besides a lengthy contribution to the American Gynecological Society.[1]

There is, I believe, no exception to the rule that all those observers who were competent to make an intelligent study of the uses of electricity in gynecology have arrived at conclusions that point to its great value, and not a few of them look upon the methods as yet in the infancy of a most useful life. An intelligent comprehension of the future of methods possessed of such apparent possibilities—methods that admit of direct penetration to diseased tissues and the convergence therein of many known and many yet unknown remedial agencies—cannot do otherwise than compare them with the recent triumphs of electricity in the arts and industries. May not this future progress of medical and surgical electricity be phenomenal also? But a hundredth part of this pace would revolutionize both medicine and surgery, already enriched by these newly discovered powers of hitherto unheard-of strong currents and the less known cataphoric actions by which useful drugs may be carried through the skin and tissues to actual seats of disease.

Confining attention to existing knowledge of the subject, a brief outline may be given of the present status of electro-therapeutics in gynecology, in the shape of a collection of opinions such as the writer is compelled to send daily to inquiring physicians whose engrossing work in other directions is more than ample excuse for a lack of familiarity with the latest details and results in this field of special practice.

Fibroid tumors. In the writer's personal experience, six of these growths have disappeared by absorption under electric treatment. One of these was as large as an adult head, extending above the umbilicus, the bulk of the remainder being much smaller. Of the other cases, about 92 per cent. were arrested and reduced in size in varying degrees, a symptomatic cure, in the removal of pain, hemorrhage, etc., being practically invariable. About 8 per cent. were unsuitable for this mode of treatment.

The cases best suited for the method are those that present nodular, interstitial growths of all sizes

[1] Massey, G. Betton: Electricity in the Diseases of Women. Philadelphia: F. A. Davis, 1st edition, 1889; 2d edition, 1890.

Bigelow, H. R.: Gynecological Electro-therapeutics. London: H. K. Lewis. Philadelphia: J. B. Lippincott, 1889.

Grandin and Gunning: Electricity in Gynecology. New York: William Wood & Co., 1891.

Goelet, Augustin H.: The Electro-therapeutics of Gynecology. Detroit: George S. Davis, 1892.

[1] Engelmann, George J.: The Use of Electricity in Gynecological Practice. St. Louis: Reprint from Gynecological Transactions, 1886.

and in which the uterine cavity is involved and enlarged. Hemorrhagic complications probably favor ultimate decrease and disappearance, these complications themselves being readily removed. The unfavorable cases are those in which the growths are subperitoneal and but slightly connected with the uterus; the tumor being too far removed from the cervical portal of treatment. When very large, they may be reached by puncture through the abdominal wall. The edematous and soft myomata are unsuited to the ordinary mode of applying strong currents, but may be helped and at times greatly reduced by patient percutaneous treatment, while the degenerating fibro-cystic variety is still regarded by many as contra-indicating electric treatment.

Chronic metritis and subinvolution. Catarrhal and inflammatory affections of the uterus, so often the initial points of ovarian and tubal disease and malignant growths, offer probably the most important field for electricity in gynecology. As a topical application to the uterine cavity, electricity is possessed of many advantages, with which are associated even more important contractile and sorbefacient actions, increasing the tone of the relaxed and congested muscular tissue and promoting metabolic changes in the older cases characterized by sclerosis. Avoiding the dangers and discomforts of other less effective remedies, such as the application of acids and of iodine, and the curetting operation, electricity does not accomplish results by harshly destroying the mucous membrane, but by a stimulation of cell-activity in all the affected tissues, the influence on the neuro-muscular elements being unique. In those instances in which the affection is no longer restricted to local lesions, but involves the nervous system and the general health, the local treatment should be supplemented by general tonic applications of electricity and massage. The association of nervous break-down and neurasthenia with this condition has been noted for many years, and it is only lately that its importance is in danger of being neglected in favor of views that relegate the mischief entirely to the nervous system. Having failed to cure their cases by scraping and by repairs of innocent tears of the cervix, many surgeons have begun to deny the importance of these catarrhal hypertrophies, placing their patients on the rest-treatment as a last resort. Catarrhal hypertrophies are productive of even more mischief within the uterus than within the nasal cavities, and it is only when associated with properly directed treatment to the original focus of disease that the rest-cure can remove the results of the local affection. A divorce of gynecologic from neurologic treatment in such cases is inimical to complete success. In my experience some cases of neurasthenic backache, associated with enlarged uterus, have yielded to single applications of the galvanic current within the uterus.

Another class of cases of chronic metritis is neglected because the surgeon's attention is directed exclusively to secondary affections of the tubes and ovaries, and the appendages are removed under the impression that they alone are diseased. In these cases a continuance, or even an increase, of the pain is the inevitable result of the operation until the true nature of the affection is recognized and proper treatment instituted.

In recent subinvolution of the uterus after childbirth the faradic current is usually sufficient, though coëxistent metritis will always require the conjoined employment of galvanic treatment for its topical action. The treatment of the later stages of subinvolution does not differ materially from that adapted to chronic metritis, though less time is usually required to accomplish a permanent cure.

Metrorrhagia. In post-partum hemorrhage strong faradic currents from the primary wire are instantaneous in causing contraction of the uterus, with cessation of the bleeding. The current is preferably applied by an aseptic, intra-uterine bipolar electrode, but in its absence any monopolar electrode that has been steeped in boiling water may be inserted and the circuit completed by a large abdominal pad. In hemorrhage more remote from the puerperium, including that due to retained decidual shreds, the faradic current becomes progressively less valuable than the galvanic, the cases of hemorrhagic endometritis and menorrhagia requiring the latter. Under the action of currents of from ten to seventy milliampères the fungous and granular surfaces of the endometrium are freshened and quickened and the smaller shreds detached and permitted to drain away, and thus the source of the troublesome dribbling corrected without harsh scraping. The positive pole, which is usually the best for this purpose, has the incidental advantage of being decidedly microbicidal when the current is strong, as ascertained experimentally by Apostoli and Laguerrière.[1]

Displacements. Nearly forty years ago the doctrine was advanced that flexions and versions of the uterus were not in themselves important, and gave rise to suffering only by reason of other conditions associated with them. This view, though early buried under an avalanche of pessaries and other mechanical supports devised under an opposite belief, has of late been revived by those that not only doubt the correctness of the principles involved in the use of pessaries, but are in a position to see the harm done by the pressure of these devices on inflamed and tender ovaries and

[1] Reprint from Répertoire de Police Sanitaire, Vétérinaire et d'Hygiène Publique. Paris, 1891.

the stretching of already weakened vaginal supports. The truth probably lies nearer the assertion of the secondary importance of the displacements in the majority of cases, though its demonstration in the past has been hampered by inadequate means for the cure of the associated conditions. Now that the metritis, endometritis, and perimetritis may be successfully combated by the restorative action of galvanic currents, the real harmlessness of many deviations in the position and shape of the uterus becomes manifest, though often the deviations themselves are lessened by the curative process. Lacking the causative congestions and inflammatory conditions, it is hard to see how they are as important as has been assumed, and, if so, how the placing of an unnatural skeleton in the vagina is to accomplish a cure rather than mere amelioration. Such artificial aids to regain a supposedly correct straightness cannot in any way compare with the natural muscular supports of the uterus, and when removed must leave these structures even more relaxed and weakened than they were before. Such relaxations of the vagina, due to atrophy of the muscular fibres of its walls, require toning and stimulation rather than further weakening by the distention of pessaries and tampons. It is an orthopedic question, and all experience with weakened muscles on the exterior of the body teaches us that apparatus is secondary to electricity, massage, and gymnastics. Either faradic or galvanic currents are most useful in restoring muscular force and vigor and retaining prolapsed uteri in normal position, unless by reason of deep tears of the vaginal muscles or of profound degeneration the organ is beyond other aid than that given by such devices or by surgery. When this toning is possible, important subsidiary results may follow in the lessening or removal of atonic dispareunia, which is often at the bottom of weakened conditions in both sexes.

Ovaritis, salpingitis, and peri-uterine inflammation. In these distressing conditions the recent doctrine has been taught that amputation of the ovaries is the only remedy. I shall not discuss the startling frequency of this mutilation of the body, or the increased pain rather than relief that results at times in non-fatal cases; but I wish to affirm that chronic inflammatory affections of the adnexa that are unaccompanied by abscess or cystic accumulation are almost invariably amenable to relief and cure by the interpolar action of the galvanic and faradic currents. The results are at times as striking as those that follow a similar percutaneous application to a sprained ankle, the engorgement, hyperplasia, and plastic exudates being dissipated and absorbed, and a case otherwise condemned to the uncertainties of an operation for castration restored to practical and permanent health. Some old adhesions will remain, it is true, as in an old pleurisy, but the active morbid condition from which the patient suffered will be cured. The most obstinate cases are not those in which ovarian and perimetric inflammation predominates, but the tubal cases; yet in these, also, continued treatment will often achieve complete restoration of health, without mutilation or the artificial production of conditions that normally occur in old age. Cases of simple ovaritis attended by ovarian congestion, cases of enlargement and of ovaralgia, are quickly amenable to treatment, the writer having notes of a number of such cases in which this treatment was successful when undertaken after a day had been set for operation.

Menorrhspasm and menorrhalgia. Personal observation of the curability of painful menstruation by the use of the galvanic current during the intermenstrual period led me to make a reëxamination of the prevalent views of the nature and causation of the affection several years ago, the results being reported to the Philadelphia Obstetrical Society. The conclusions arrived at were that what has been called obstructive dysmenorrhea is extremely rare, the supposed stenosis being a mere spasmodic contraction of the circular fibers of the internal os. The morbid element is not obstruction, but functional spasm, as already proved by Schultze, who showed that accumulations never existed. An even better proof may be obtained by subjecting a patient, while in the throes of the pain of menorrhspasm, to a simple abdomino-dorsal application of the galvanic current, by means of large electrodes, on one of which the patient reclines. If the current is turned on without shock until a strength of a hundred or a hundred and fifty milliampères is reached, the pain will usually be quelled for that period, and a freer flow is immediately obtained. If the pain and lack of flow were due to fibrous constriction, the current would intensify the pain rather than relieve it, for it would increase the force of the alleged "mimic labor," and could not, thus applied, relax a fibrous stricture. To accentuate this view of the pathology of the trouble the name menorrhspasm was proposed in place of dysmenorrhea, the latter having received too mechanic a meaning in the past. Symptomatically considered, it was but a menorrhalgia due to hyperesthesia of the uterus and adnexa, the attempt at functionation causing a painful neuro-muscular storm. Moderate galvanic currents by the vaginal or uterine method, in accordance with the condition of the endometrium, allay the causative hyperesthesia, stimulate undeveloped organs, and cure associated catarrhal tendencies. About two inter-menstrual periods constitute the usual time required.

Pelvic neuralgia. Persistent pain in the pelvic region, particularly in the neighborhood of the

ovaries, or radiating from the pelvis to the hips, back, and thighs, may be due to organic congestion and inflammation, to inflammation of the pelvic nerves, or to centric disease of the nervous system, an exact diagnosis being at times impossible. When due to congestion, as in youthful persons and in those with undeveloped organs, the faradic current of the fine wire is most efficient (as maintained by Tripier, Apostoli, and others), when associated with general electric treatment and massage. If inflammation is found, the methods detailed elsewhere should be employed and will usually be found effective.

The existence of inflammation of the cerebro-spinal nerves of the pelvis has received no attention so far from either writers or clinicians; yet undoubted cases have occurred in the writer's experience. In character of pain the affection much resembles sciatica, except that the situation is usually in the neighborhood of the ovaries or higher up. The sclerotic ovaries that have at times been ineffectually removed for the relief of this neuritis indicate one of its effects, and emphasize the neural origin of the trouble. In the treatment of this variety of pelvic pain the franklinic current has value at times, though resort must usually be had to the galvanic, as in sciatica and crural neuralgia. Some cases are of undoubted centric origin, and in these neither electricity nor removal of all of the contents of the pelvis piecemeal will avail anything in affording relief.

Neurasthenia and nervous prostration. In considering the place and importance of electricity in neurasthenia and nervous prostration, the writer should state that the first name, neurasthenia, is applied by him to those cases that, grossly speaking, are traceable to some internal or constitutional cause, while the term nervous prostration is reserved for the cases clearly occasioned primarily by an external stress, either mental or physical. The two conditions insensibly shade into each other; yet important practical differences are often noticeable. As to the nature of these multiform diseases and their causation it is, of course, true that neurasthenia in the female is frequently a reflex from the irritation of a metritis or ovaritis, and in such cases good results can only be obtained after cure of this initial point of disease. There are, nevertheless, many cases that are not associated with pelvic disease, and in these there can be no question of the correctness of the hypothesis of Beard that places much of the onus on the central nervous system itself; yet a still more remote and real cause is doubtless the auto-intoxication of the individual by vitiated secretions. Incapable of producing healthy products, by reason of lessened vigor in the nerve-centers, the secretory organs of the body, particularly those of the digestive and assimilative apparatus, permit re-absorption of poisonous ptomaïnes that, in the peculiar condition of the nervous system, reinforce the original conditions giving rise to them, thus maintaining a vicious circle of chemic and vital reactions.

In the treatment of these conditions electricity is usually associated with the other features of the "rest-cure," though also often found by the writer efficient without them; but experience has led me to vary this feature somewhat from the plans followed during my early association with the distinguished author of the rest-treatment of nervous disease. Instead of relying mainly on faradic stimulation of the muscles of the exterior of the body, the galvanic current is applied to the same parts by the mono-polar, labile method and large flexible electrodes, carrying from ten to forty milliampères. By this means even more thorough contractions may be obtained than with the faradic current, with a far greater stimulation of the vital processes of the periphery, resulting in a more useful reaction and quicker disappearance of cold extremities and other evidences of vasomotor stasis. Conjoined with this, a more profound impression is made on the spinal centers and the abdominal nerves and viscera by strong labile galvanic currents, which are rendered agreeable by means of large, saponified polar surfaces. The comparative results obtained with and without these features have proved that they are a most important part of the rest-cure methods, and may even be employed without the other features in cases that do not take kindly to the more rigorous measures of enforced rest and seclusion.

Hysteria. Electricity is an invaluable agent in hysteria, but the various currents that may be used require little comment, since any and all methods have met alike with success and failure. When the therapeutic results of the electric force cannot be separated from the possible chance of being mixed with the effects of suggestion, scientific investigation is at a serious disadvantage; yet it should not be forgotten that our efforts are directed toward a cure, in most instances, rather than investigation. A lack of rational explanation does not detract from the practical value that is so frequently demonstrated. When directly of value in hysteria, electricity doubtless acts by improving the organic functions.

Spinal irritation. Whatever may be the pathology of this ill-defined condition, there can be no question of the value of galvanic currents and franklinic sparks in the cases of nervous young people, chiefly young women, whose most striking objective symptom is a tenderness of the spinous processes of the vertebræ, and whose subjective symptoms are legion, centering about a weakened back. The treatment recommended for neurasthenia is also adapted to this condition, which is, in fact, not easily separated from neurasthenia; but the most useful feature is

unquestionably the direct electric treatment of the spine.

Insomnia. Though essentially a symptom rather than a disease, continued wakefulness may assume primary importance by the establishment of a vicious habit of the nervous system. The use of drugs for the correction of any but the most temporary of such conditions cannot be too greatly condemned, as there is danger of substituting an even more deplorable habit. Associated with a search for and correction of the causes of insomnia, the direct treatment should employ all the known external agencies for favorably altering nerve-habits, chief of which are electricity and massage. The former should rarely be applied immediately before sleep is sought, but earlier in the day, to permit of the reposeful reaction that in some cases does not appear for several hours. This is especially true of the earlier stages of treatment, when increased wakefulness will at times result temporarily if the application is too near the hour of retiring. The daily administration of general franklinic sparks, varied in power according to the case, is probably the most useful method, though it should be usually associated with either general faradic stimulation or the galvanic method recommended for neurasthenia. Under these means the insomnia will yield within a few weeks, and if the original cause can be removed, "Nature's sweet restorer" may be enjoyed in its pristine comfort.

Gastro-intestinal torpor and obstruction. The field of usefulness of electric currents in torpid conditions of the gastro-intestinal tract extends from the slight habitual constipation so common in gynecologic cases to the most profound intestinal paralysis and obstruction; and in the last-named conditions a large number of cases are now capable of being saved that would otherwise be beyond relief under medicinal or surgical treatment. The galvanic current is the most useful in all the conditions just named, doubtless owing to the fact that in simple constipation the stimulating action exerted by it (in common with the faradic current) on the muscular layers of the bowel, gall-bladder, and the various glandular ducts, is supplemented by a stimulation of the secretory functions of the stomach, liver, pancreas, and intestinal glands. This power of the galvanic current may be illustrated at any time by making an application to the parotid gland, and an external application of a strong labile current to the region of the liver will usually result in distinct evidences of increased discharge of bile. By the percutaneous method each organ may be brought under the mild influence of this current, but a greatly increased action is possible in the case of the stomach and the lower colon by placing one pole within the viscus. In moderate torpor the external method will usually suffice, and both currents may be used, either in succession or simultaneously.

Diseases of the bladder and urethra. In neuroses of the bladder and urethra, not demonstrably connected with organic disease, the faradic current, applied directly within the canal or cavity, is of much service. The fine-wire current is indicated. In incontinence of urine due to relaxation of the sphincters or to the presence of residual urine in a bladder affected with atony of the detrusor muscles the primary faradic current, applied by the swelling method, is of exceedingly great value. The method is also indicated as an adjuvant in the treatment of cystitis, with retention of residual urine. Chronic urethritis, disseminated or occurring in patches, demands the negative pole of a weak galvanic current as the most certain means of obtaining a radical cure. A purely physical use of electricity in diseases of the bladder is the electric-light cystoscope, by which the interior of the bladder may be illuminated and brought within the range of vision.

Neuroses of the vulva. The galvanic current has been recommended in pruritus vulvæ, ten milliampères positive being applied by means of a large pad-electrode. For irritative conditions of the vulva, giving rise to vaginismus, the same method is useful, accompanied by the fine-wire faradic current from an electrode in the introitus. It might be useful to moisten the cotton of the carbon electrode with a weak solution of cocaine, as the quick diffusion of this remedy by the current from the positive pole inward has been clearly proven.

Amenorrhea. In the suppressio mensium of young girls, due either to change of environment or habits or to catching cold, abdomino-dorsal galvanic applications will quickly restore the function. If anemia exists, the responses will naturally be slower, but the value of the applications mentioned, as a tonic to the blood-making organs, should indicate their persistent employment until the system can meet the periodic call upon it. Local treatment is, of course, not called for in such cases, though the value of the negative pole, applied within the cavity of the uterus, in reëstablishing and increasing the flow in parous women, is very well known.

Chlorosis. The employment of combined abdomino-dorsal currents, with large poles, in chlorosis is an extremely valuable adjuvant to iron and the eliminative treatment.

Sterility. One of the claims for electricity that has thus far been relatively neglected is its value in the treatment of matronal sterility due to disorders of the uterus and Fallopian tubes. The taste of American women is such as to call for but little work of this sort, but a fortunate experience of the writer among Hebrews, who universally desire off-

spring, has convinced him, by the unquestionable evidence of births from long-sterile women, that the method is one of great value. The mode of action may be by ovarian stimulation; but, as all the cases treated presented evidences of catarrhal affections of the uterus or of the uterus and tubes, some being veritable examples of patulous pus-tubes, a more reasonable explanation is that a cure of the catarrh has rendered it possible for an ovum to survive contact with secretions that had been poisonous. The methods are those used in the milder cases of chronic metritis.

Extra-uterine pregnancy. Notwithstanding the extreme position of some surgeons that an abdominal section should be performed as soon as reasonable suspicion of this unfortunate accident arises, the verdict of many is that electricity should be employed at once in case the condition is suspected to exist and the discovery is made prior to an intra-abdominal rupture of the sac. The advantages of this procedure are: No harm is done if the diagnosis is incorrect; if the pregnancy has not advanced to the fourth month the fetus and membranes will be absorbed, and no operation will be required; if the pregnancy has advanced beyond the fourth month the arrest of fetal vitality will render subsequent operation safer and lessen the chances of rupture. After the arrest of the vitality of the fetus the galvanic treatment should be continued for some months to promote absorption of the ovum itself, the incubative hyperplasia surrounding it, and any hematoma that may have formed.

Tumors of the breast. In acute mastitis after childbirth the faradic current will be found of considerable service in reducing congestion and inflammation, if applied at each renewal of the indispensable bandaging. Chronic inflammation of the breast, or of one or more of its lobes, is best treated by the galvanic current in association with massage, and speedy results may be anticipated.

For non-malignant tumors of the breast the galvanic current is almost a specific, whether the tumor be a mere nodular enlargement of the lobe or a fibroid. In either instance the external, percutaneous application of the current from well-proportioned electrodes will often be quite sufficient, though fibroid growths will at times require electro-puncture. It may be safely asserted that the prevalent employment of these means in such cases will effectually dispose of the doctrine advocated by some surgeons that any tumor of the breast should be removed on general principles.

Carcinoma. Under the stimulus of an increasing familiarity with the value of electricity in fibroid tumors, a method of treating malignant tumors by electrolysis that was first employed some years ago has been recently revived, and bids fair to be a weapon of vast importance in these affections. It consists essentially in the use of strong currents confined to the growth and the immediately subjacent tissue, whereby the malignant cell-structure is destroyed, either by electrolytic decomposition or by histologic shock. The latter method is the one claimed to occur by Inglis Parsons, who uses as strong a current as one of 600 milliampères, by multipuncture and sudden reversals of the current. Under the electrolytic method, which differs only in the absence of current reversals, the softer forms of carcinoma will be dissolved into a brownish liquid by currents of strengths of from 400 to 600 milliampères, and this, too, without pain, unless the action is carried beyond the diseased tissue. The method may, therefore, be employed in many cases without an anesthetic, and should be persisted in until all vestige of the growth has disappeared. This bipolar method should be followed by the monopolar method, also, in order that the affected channels of communication with the body may be traversed also by destructive currents. In epitheliomata of the softer kind it is probably true that these channels rather than the healthier tissues surrounding them receive the brunt of the current, for the physical reason that the carcinomatous tracts are better conductors than the less watery tissues. The degenerate tissue seems also to have a lessened vital resistance, as it is more easily rendered necrotic by the current. The electric methods have the additional advantage of controlling pain and hemorrhage during their employment. Besides the ease and the painless nature of the electric method of curing carcinomatous growths, it is probable that the power of following the growth through its roots and ramifications presents a most important advantage of this method over that by the knife or cautery.

The cosmetic applications of electricity. A review of the uses of electricity in the restoration of the health of women would be incomplete without a notice of the value of this agent in the removal of certain blemishes of the skin that at times do so much to disturb the mental health and equipoise. I allude to the removal of superfluous hair, moles, warts, nevi, and port-wine marks by the use of the electric needle. In the removal of hairs no other method can compare with electrolytic destruction of the hair papilla, and in the other troubles mentioned the advantage of electricity resides in its simplicity, relative painlessness, and the certainty of either leaving no scar or a smaller scar than treatment by any other method.

The Northwestern Society of Philadelphia meets on the second Tuesday of each month at the office of different members. The society is two years old and has a membership of thirty. Its objects are scientific and social.

SURGICAL DISEASES OF THE URINARY ORGANS.

BY W. S. FORBES, M.D.,
PROFESSOR OF ANATOMY, JEFFERSON MEDICAL COLLEGE; CLINICAL SURGEON TO THE JEFFERSON MEDICAL COLLEGE HOSPITAL.

IN this paper, and in the one or more succeeding, I shall confine myself to the diagnosis and treatment of that common and painful malady known as stone in the bladder, reserving for future occasions what I may have to say concerning some other affections of the urinary organs.

It is proper to observe here, by way of preface, that these organs, the kidney, the ureter, the bladder, the prostate gland, and the urethra, are liable to certain diseases to which surgeons have directed their special attention, and that these diseases have by common consent been called surgical diseases of the urinary organs. They have been conveniently classified in two divisions—those that are inflammatory and those that are obstructive in their nature. The inflammatory diseases are nephritis, ureteritis, cystitis, prostatitis, and urethritis. The obstructive diseases may be arranged under the following heads:

1. Stricture of the urethra.
2. Tumors of the bladder.
3. Tumors of the prostate gland.
4. Enlargement of the prostate gland.
5. Stone in the prostate gland.
6. Stone in the urethra.
7. Stone in the pelvis of the kidney.
8. Stone in the bladder.

It is of the last-named malady that I now wish to speak.

First, as to the diagnosis of stone in the bladder. To know accurately the disease one has to deal with and to point it out—this is diagnosis, and it is of the first importance. It is an art, and can only be successfully practised by obtaining an accurate knowledge of all the facts bearing on the case to be examined, and then deducing the true inference from these facts. To do this, skill and experience and accuracy of observation are necessary. The line of examination is held on the rational and on the physical symptoms.

The rational symptoms of stone in the bladder include frequency of urinating, the existence of pain, the altered character of the urine, together with the manner of its passage, and the passing of a little blood now and then. The result of a careful examination of the patient under these several headings may lead to a very pronounced *suspicion* as to the existence of stone, but its actual presence in the bladder can only be determined by passing into the bladder a sound, and with this instrument *there* touching the stone.

The description of the sound, together with the manner of passing it through the urethra and into the bladder, "the act of sounding," as it is called, I shall carefully describe when, further on, I shall speak of the physical symptoms of stone.

I repeat, that while the several rational symptoms or signs enumerated, viz., frequency of urinating, pain, the altered character of the urine, the manner of its passage from the bladder, and the presence of blood, point to stone, yet it must not be forgotten that the positive existence of stone can only be demonstrated by instrumental touch. In short, these rational signs are not always to be depended on; they exist in other affections of the urinary organs and are not peculiar to stone alone. Thus, the bladder when inflamed will not tolerate the presence of urine but to a limited amount, and in contracting to expel it pain will be developed, and if the inflammation be intense there may be some blood and pus mingled with the urine, thereby altering its character. Then there may be enlargement of the prostate gland compressing the urethra, or a stricture of the urethra in its membranous or its penile portion, altering the stream of urine in its passage. In how far then the rational signs may determine the surgeon to make an instrumental examination, it may be well to state:

First, in regard to the frequency of urinating; while this is found to be present for the most part in all the diseases of the urinary organs of an inflammatory nature, and especially when the inflammation is acute, yet it is a prominent symptom of stone, and in relation to the exact time of its occurrence is of much diagnostic value.

At night, when the patient is in bed and the body at rest, the bladder is found to tolerate a larger quantity of urine than it does during the day. Motion causes increased irritation of the bladder, and hence its more frequent contraction to expel its contents. The presence of a stone contributes under motion to increase this irritation and consequent frequency of the act of passing the urine. Hence, the value of the observation in regard to the time of increased activity on the part of the bladder. When there is enlargement of the prostate gland, without the existence of stone, there is greater frequency of urinating during the night than there is during the day.

In regard to the symptom of pain, its locality and the time of its occurrence are of much diagnostic significance. Riding over a rough road, a false step, a sudden or unexpected jar from any cause, will develop pain in the bladder, and especially at the extremity of the penis; and after making water, the bladder continuing to contract on a stone, there will, as a general thing, be greater pain than ordinarily, which will continue for some time, indeed until the urine, pouring down the ureters from

the kidneys, gently lifts the wall of the bladder from the hard stone; then the pain will in a measure cease. If the bladder is contracting, after urination, only on an enlarged or chronically inflamed prostate gland, the pain at this moment will not ordinarily be so great and is located for the most part in the perineum. When the bladder alone is inflamed, the pain comes on before making water and is located behind the pubic bone. In stricture of the urethra the pain is located for the most part at the seat of the stricture. In children having stone, there is not only severe pain after making water, but there is such a constant irritation between times, referred to the extremity of the penis, that pulling and rubbing the foreskin by the little sufferer is so frequent that this structure becomes hypertrophied to a marked degree. The amount of pain does not always depend on the size of the stone. A boy, eleven years old, from whom I removed by lithotomy a uric-acid stone ten grains in weight, had suffered excruciating pain for three years. When he came under my care, the mucous membrane of the rectum and the lower bowel projected eight inches from the anus, while straining, after making water. The mucous membrane and the submucous tissue were greatly thickened. The little patient was restored to health some weeks after the operation. Some months after this, a man, forty years old, consulted me on account of a bladder-trouble of long standing; but only of late had it pressed him to seek relief. His general health was and had been good. The rational symptoms were not well marked; only the appearance of blood to an increased amount of late after riding horse-back had awakened his anxiety. On sounding him I found a large stone and advised its removal. He consented, and I removed the calculus by bilateral lithotomy. It was found to be composed of triple phosphates, and measured 1¾ inches in its narrowest diameter, and 2½ inches in its longest diameter, and weighed 2 ounces and 180 grains. The man made a rapid and good recovery. The adult man may carry a small stone in his bladder for a long time without even suspecting the presence of a foreign body; the symptoms, the evidence of its presence, may at times be so slight as not to arrest his attention, or if noticed, are often attributed to other causes and are neglected, and thus the stone is allowed to increase in size until there is an awakening that drives him to seek relief.

In order to observe to what extent the urine is altered in character, it is necessary first to know its normal state; and, being a complex fluid, it is convenient in making an examination to have recourse to a form in which its healthy and its unhealthy constituents may be recorded side by side. The urine to be examined should be about four ounces or more in quantity. To obtain such a specimen the patient should always be instructed not to collect the first two or three tablespoonfuls in urinating, but to allow about this amount to pass off free, and then continuing to urinate let the fluid flow into a clean bottle, the object being to wash out the urethra, as it were, before collecting the specimen to be examined; otherwise it may contain urethral discharges, which, in examining the urine for information in regard to bladder-trouble, may be misleading. I have used the following form for a number of years in examining urine, and have found it satisfactory:

ANALYSIS OF URINE. Day. Month. Year.
Case. A. B.

PHYSICAL CHARACTERISTICS.

24 hours' quantity.	Sediment.
Color.	
Reaction.	
Sp. gr.	

NORMAL SUBSTANCES.

H_2So_4 test.	Chlorides.
Indican.	Phosphates.
Urates.	Carbonates.
Uric acid.	Sulphates.

PATHOLOGIC INGREDIENTS IN SOLUTION.

Sugar.
Albumin.
Others.

MICROSCOPIC EXAMINATION OF SEDIMENT.

Epithelial cells.
Pus-cells.
Crystals, etc.

Diagnosis.—

In a case of suspected stone the specific gravity of the urine, its reaction, its epithelial cells and its pus-cells, the sediment, and the crystals should be noted, and the record preserved for reference; for the urine should be examined repeatedly, and while the case is under observation the results of these examinations should be compared, for from the examination of the urine much light can be thrown on the subject as to the organ affected—whether prostate gland, bladder, or kidney. I shall speak of these subjects hereafter. The manner of the passage of the urine should be noticed, for at times the stone, if one be present, may roll along the neck of the bladder and suddenly occlude the internal meatus of the urethra, so that while making a comparatively full stream of urine it will at once cease to flow and great pain follow on the contraction of the bladder. In many cases of stone this symptom does not exist. It is because of this trouble—this sudden cessation of the stream when it has been flowing freely—that the patient finds that he can urinate

more comfortably by getting on his knees and lowering his abdomen, the stone then being away from the internal meatus of the urethra, until he has emptied his bladder.

The presence of blood, under certain conditions, is more significant of stone in the bladder than any of the other rational signs. The quantity may be, and generally is, small, and may appear only now and then; yet a little bleeding nearly always takes place at some period in the history of the case. In the nature of things we would expect it to appear. The delicate mucous membrane, lashed by the contractions of the muscular coat against so hard, and at times so rough, a body as a stone, is liable to be torn and to have its small capillary vessels ruptured, and bleeding is the consequence. The blood generally appears at the close of the act of making water. It may appear at other times, and again it may be found mixed with the body of the urine. In inflammation of the bladder and of the prostate gland, and in rare cases of tumor of the bladder-wall, some slight bleeding may occur, but this is not often the case.

Of the rational symptoms of stone, the frequency of urinating, the presence of blood, and pain, are of most value as diagnostic aids. Their existence is sufficiently suggestive to warrant the surgeon in asking permission of the patient to make an instrumental examination. This examination is made with a sound and with the index-finger. The sound is a solid steel instrument. For the adult it should be about twelve inches in length, two inches of which should be allowed for the handle. It should be smooth and highly polished throughout its entire extent. Its body should be of uniform size, and differ from the catheter in shape in that the sound should have a short and somewhat abrupt curve at its vesical extremity. For the small and delicate urethra of a child the size of the sound should be No. 7 of the common American scale, and for the adult No. 11 is large enough. The instrument should be but little smaller in diameter than the urethra, in order that it may be moved with freedom. The object of introducing the sound into the bladder should always be held in immediate view; it should be distinctly this—to convey to the mind of the surgeon through the sense of *touch* and through the sense of *hearing* whatever the instrument may come in contact with on its way to and while it is in the bladder—in short, he desires to know the condition of the urethra and the condition of the bladder and its contents.

Before making an instrumental examination of the urethra and bladder the surgeon should thoroughly sterilize his hands and his instruments. He should cleanse his finger-nails and wash and scrub his hands and forearms with soap and warm water, and soak them well in a warm solution of mercuric chloride in the proportion of one part of the chloride to one thousand parts of water. The instrument should be well cleaned and sterilized. The sterilizing of the instruments can be well accomplished by placing them in boiling water for ten minutes and then anointing them with vaselin, each twenty grains of which should contain one grain of carbolic acid. The patient should have his rectum well washed out and be under the influence of ether.

In order to introduce the sound the patient should be in the recumbent position, and the surgeon should stand on the left side of the patient. Holding the sound by its handle with the thumb and index-finger of his right hand and taking the penis by the corona glandis with the thumb and index-finger of his left hand, and holding the organ just in front of the lower part of the linea alba, the beak of the sound is placed in the external meatus of the urethra and carried gently under the pubic arch. The extremity of the sound will now come to the triangular ligament of the urethra, and if the surgeon will elevate the handle of the sound the beak will pass into the membranous part of the urethra and be grasped by the constrictor muscles that surround this portion of the urethra. If the surgeon will now wait for a moment or two, these muscles will relax their grasp, and the sound by its own weight will most probably glide into the prostatic portion of the urethra, and then, by gently depressing the handle of the sound, its vesical extremity will pass into the bladder. In the same manner the ordinary catheter should be passed into the bladder for the purpose of drawing off the urine. Unless there is a stricture or a foreign body in the urethra, there should be no difficulty whatever in the introduction of the catheter or the sound. It is surprising, in the absence of a stricture or a foreign body, to observe what difficulties are made to surround this simple operation of introducing the sound or catheter into the bladder. A knowledge of the anatomy of the parts, with gentleness and a little tact, will ordinarily secure the success of this simple operation.

On one occasion I saw too small a sound used; it passed by a piece of bone projecting into the urethra; a larger sound was used and passed only to the piece of bone, which was readily removed by a perineal incision.

When the curve of the vesical extremity of the sound is completely in the bladder, in the greater number of cases in which a stone is present, the sound will come at once in contact with it. If the stone is not at once felt, the sound should be turned gently on its long axis to the right and to the left and the extremity of its beak made to pass over the lowest point of the bladder, behind the prostate

gland. If, at this time, the surgeon, while holding the sound by the handle with the thumb and index-finger of his right hand, will anoint the index-finger of his left hand and introduce it into the rectum he can examine the prostate gland, its size, and its density, and note any irregularity of its contour that may exist, a matter that may be of much importance in any operative procedure that afterward may be necessary; he will be enabled also to observe the relative depth of the perineum and the relative position of the sound, as well as to dislodge a stone that may be hidden behind the prostate gland. He will also be enabled to observe any thickening or irregularity in the wall of the neighboring portion of the bladder. The surgeon in his first examination may fail to touch the stone with his sound; indeed, several examinations may be made with negative results; but when the stone is once touched with the sound the result is positively affirmative of its presence. The sensation imparted to the fingers holding the sound when it comes in contact with the stone is peculiar, and once experienced cannot fail to elicit attention, and if at this moment the sound is made to tap the stone a distinct and characteristic *click* will be *heard*. The sense of hearing is thus made to confirm the sense of touch. The surgeon should elicit this click. It is well to have a little urine in the bladder in making this examination. If there are more than two or three ounces of urine in the bladder a small stone will not be so readily detected. A large stone is easily found, but when a small stone is present it is of vast importance to the patient that it should be detected. If it is not detected, and if left alone, it will in all probability become a large stone. If a small stone is found, it may easily be removed by crushing. If there should be a very large stone, or a very hard one, such as a calcium oxalate formation, it may be a question as to whether it should be removed by crushing, by perineal lithotomy, or by suprapubic cystotomy. This question will engage our attention on a future occasion.

THERAPEUTICS, PRESENT AND PROSPECTIVE.[1]

BY C. W. BEAUMONT, M.D.,
OF CLARKSVILLE, TENN.

MATERIA medica, as now represented in our national dispensatories, exhibits a catalogue of substances, officinal and unofficinal, with their numerous preparations, simple and compound, dry, fluid, and solid, and some hundreds of miscellaneous formulæ, amounting to more than nineteen thousand parts. Deducting unofficinal drugs and formulæ and others used chiefly in the arts, there still remains a list exceeding sixteen thousand in number.

This perplexing accumulation of materials is inherited from a professional ancestry of centuries past, but, like many other legacies, it contains bequests that are undesirable and may well be relinquished. Marvellous as it must be regarded, on account of its magnitude, and also for certain titular emblems of therapeutic authority, attesting its real merit, there are nevertheless weighty objections to it, professional and popular, which demand serious consideration.

In the first category is the fact that a large number of drugs, long since passed into disuse because they are worthless, and many others of such feeble or doubtful power as to be practically useless, and others still not strictly medicinal, are retained.

All of these, together with unofficinal articles and formulæ, eliminated, the ponderous volume lying on our office tables might be reduced to a weight and dimensions that would facilitate instead of hindering ready and frequent reference to its contents. The classification and value of the individual drugs are almost wholly based upon clinical observations alone, and these furnished by many authors, the essential conditions of whose separate work are obviously so various as to render their reports often conflicting and sometimes positively contradictory.

The crudeness of the materials from which we must derive our medicinal resources, and the wide variability in quantity noticeable in each particular drug, resulting from physical, clinical, and meteorologic causes, necessarily leads to inappropriate dosage, and hence to uncertain effect. Even those subjected to careful assay, as, for example, fluid and solid extracts, and obtained from the very best pharmacists, are not wholly exempt from such changes, and when administered produce capricious effects, or, on the other hand, prove to be utterly inert—in either case bringing disappointment and mortification to the prescriber, and, it may be, peril to the patient. Accordingly, in ordering a formula, to be in dram doses, we do not know whether a full or a minimum dose will be had, or, indeed, whether much or little or any medicine at all is received.

But all professional objections weighed together do not counterbalance one that constitutes the only valid exception ever alleged, or that can be urged by the people against our therapeutic method, and that is the extremely offensive character of medicines, as we commonly prescribe and dispense them. This objection is the sole cause of the many alienations from us in the past, and of the daily addition of converts to the delusions of recusant and heretic self-styled physicians. We must admit this objection to be just and reasonable, inasmuch as each of us, from ample observation and perhaps a

[1] Read before the Tennessee Medical Society, April 12, 1892.

little personal experience, knows that our medicaments are generally obnoxious to taste, smell, and sight, often provoking the resentment of the most convivial stomach. The public denunciation is growing constantly in bitterness and vehemence, and the time has come when we cannot with justice to ourselves longer afford to debar a complaint, the further refusal to meet and adjudicate which will be most unwise with regard to our own interest, and ungenerous to our clientage.

Assuming that the foregoing objections to our therapeutics are indisputable, and that professional as well as popular interests demand their removal, a question that should overrule all others in this department of medicine confronts us, and can be answered alone by scientific medicine and in such manner as to silence at once and forever the perpetual clamor against our repulsive measures. The question the solution of which we are to work out, is not at all *can we*, but is rather *how may we* surely and speedily overcome and extinguish the single popular reproach incurred by us.

Fortunately, the present phase of therapeutics is one of transition from an empiric art, where mere clinical deductions had placed it, to that of an established science, to which it is steadily being elevated by the incessant labors of the physiologist, bio-chemist, microscopist, and of the bacteriologist. Enough has already been accomplished by them to assure us that rational medication is in sight, as, one by one, each drug in the catalogue shall have assigned to it a definite and well-ascertained physiologic force, as manifest in general effect, or by affinity for certain of the vital organs and tissues of the body. Future therapeutics is, therefore, to develop and complete a method already commenced, and will solve the several important problems suggested by our present method. Instead of crudities, perfect medicines are to be employed, and these must possess the essential qualities: purity, precise division, accurate dosage in the minutest bulk, uniform power, ready solubility, permanent form, and not be repulsive to sight, taste, or smell. With all our skill in formulating, together with that of the apothecary in preparing, especially of Galenic drugs, we cannot approach the standard indicated so long as we are compelled to draw our medicinal resources from the present officinal list; but that standard is nevertheless readily attainable, although we must give the credit of showing us the way to the extremes of nihilism, and the highest potencies in medicine.

It is more than probable that homeopathy and scientific medicine are approaching on converging lines a common ground, since on the one side there is to be seen a continuous, but stealthy advance from original nihilism, to really potent medication, while on the other there is an irrepressible progression toward the adoption of a therapeutic method that shall be at once effective and palatable.

With the absurd dogma of *similia similibus curantur*, coupled with the equally absurd assertion of the increased power of attenuations and dilutions of the thirtieth degree and upward, as formulated by Hahnemann, his system certainly suggested the practicability of exhibiting only the ultimate active principles of the botanic drugs, and reducing the inorganic bodies to a state of absolute purity.

We may well accept the method of alkaloidal and pure chemic medicines, as devised by the learned Dr. Burgraeve, as offering the best way of administering potent medicine in an agreeable form, and capable of producing certain and uniform effects. By this method alone may we overcome popular dislike to officinal medicaments, since all these may be administered in the form of tasteless granules.

Burgraeve's concentrated medicines have been in constant use for more than twenty years, and seem now to be growing in favor more rapidly than ever before. Several of our leading pharmacists, appreciating the great importance of such products, have already placed on the market a number of concentrations or alkaloids, which are steadily gaining the approval of physicians. They are offered in different forms, as tablets, granules, and solutions. Whenever pharmacists shall produce these substances in absolute purity, and all in the granule form, we will have attained a position reconciling, for all time to come, the public with therapeutic medicine.

Very few physicians are sufficiently familiar with chemic reactions to recognize the many changes occurring in crude medicines, imparting to their therapeutic effects such variableness as to render them uncertain, and, therefore, unreliable. For this reason, if no others were apparent, polypharmacy may well be abandoned in favor of a method possessing the inestimable advantages of alkaloid medication.

Of the many decided advantages of active-principle medication over other forms a few may be mentioned. Presented in the form of granules, the therapeutic effects of which are ascertained, the dosage is accurate, minute, and the effects constant, all of which are known to the prescriber, who may with confidence exhibit them even to little children, who will take them without dislike. In this form, medicines will be supplied—although they have not yet been brought fully up to the standard that we should require—equal to all demands and from pharmacies unsurpassed anywhere.

When it is considered that the number of medicines habitually prescribed by the general practi-

tioner is probably covered by the figure fifty, and certainly by one hundred, it is evident that the physician in remote parts of the country may carry a full armamentarium in a cabinet occupying little more space in the office than an amputating-case. The saddle-bags or buggy-case will readily contain a supply and assortment sufficient to meet the demands of his daily rounds, while the dispensing may be done without labor and loss of valuable time. The city physician, as well, may find his business greatly facilitated by carrying with him a case filled with these preparations, which he may dispense in less time than would be consumed in writing a prescription, with the necessary directions. He will also prevent substitution, adulteration, and repetition by others. It may be objected that we sometimes desire the effects of the whole plant, but there are few plants that, like those from which opium and quinine are derived, contain more than one active alkaloid, and the exceptions are few in which the one alkaloid does not truly represent the entire plant. These alkaloids, being capable of perfect chemic separation and exact assay, must afford an accurate measure of uniform physiologic power unobtainable by other means.

Here, then, on the ground where the two therapeutic extremes meet, scientific medicine is to stand, with all of the potent remedies that may be required at hand, and in a form acceptable to the most sensitive palate.

Besides the improvements made and others rapidly to follow in the preparation and exhibition of medicines, there are other and novel aspects from which future therapeutics may be contemplated. One is the practicability of forcing substantial medicines through the skin by means of the electric current—as, for instance, the introduction of iodine into a goitrous tumor. It is to be expected that an extended application of this method to other agents will follow.

Another, and it may be of the greatest possible value, is that which, accepting at its true worth the germ-origin of disease, seeks to repel or neutralize microörganisms by natural as well as by artificial antidotes. It has been clearly established that not the mere presence of a brood of microphytes within the body, which is a constant fact of animal life, but the toxic product generated by the parasites, is the actual exciting cause of disease. Moreover, recent bio-chemic researches have discovered the constant presence in the liquor sanguinis of a chemic agent or agents generated within the organism, and endowed with alexiteric and antidotal powers. These chemic substances are believed to be capable of actively resisting, neutralizing, and expelling poisonous matter introduced from without or fabricated within the body. For example, the specific poison pneumotoxin is always present in pneumonia until the crisis is reached, when, in favorable cases, the antidote named *anti-pneumotoxin* appearing, the poison diminishes rapidly in proportion to the development of its antagonist. This power of the living animal laboratory may yet define, if, indeed, it has not already done so, the *vis medicatrix naturæ* and justify a theory universally held half a century ago, and still avowed by not a few, that disease-processes are governed in their origin, progress, and termination, by invariable natural laws, and therefore all acute diseases being self-limited, medical art is wholly incompetent to subjugate them, or even to shorten their term of existence.

But the practice based upon that theory, that *vis medicatrix naturæ* should not be interfered with at all by active antidotal treatment, but that an expectant or negative plan only is admissible, cannot in the light of present knowledge be approved. Subject alone to natural laws, many cases of acute disease doubtless are and may be successfully resisted by the unaided organism, but who of us would consent to be an idle spectator of such a contest. Until we shall have acquired the necessary skill and method of correctly computing in any given case the relative antidotal energy of the organism to the virulence of the disease present, we cannot refuse to oppose or attack the noxious enemy. That a process by which the resisting power of the body to toxic influences may be estimated will be devised the recent brilliant triumphs of chemic physiology foreshadows, as only a matter of time not very distant for its verification. Not only has bio-chemistry already furnished the means for placing a limitation on the ravages of some of the more intensely contagious diseases, by successfully opposing or modifying and even preventing them, and also of a few that are not contagious, it is not anticipating too much to expect other results quite as marvellous to follow. In cases in which the organism is unprotected, or has failed to develop in due time the appropriate antitoxic material, thereby allowing disease to gain a lodgment within it, the deficiency will be supplied from artificial sources, always at our command. It is, therefore, quite apparent that in addition to the absolutely pure medicaments that are to be found only in the alkaloids and carefully assayed glucosides and metalloids, future therapeutics will also enjoin the general use of attenuated virus by inoculation. From these two sources are to be derived in future the most efficient measures with which to prevent, oppose, or modify all morbid operations. Steadily advancing and establishing the fixed invariable vital properties, general and specific, of individual drugs, this necessary work will not cease until the

entire catalogue of materia medica has been subjected to the crucial tests of bio-chemistry, and correctly classified and valued according to physiologic law.

Medical therapeutics represented by granules containing only the active principle of drugs, the definite vital force and direction of each being well ascertained, we may oppose disease with an intelligent simplicity or a very narrow combination of remedies. Such medicaments, together with appropriate attenuated virus, electricity more generally applied, and the development of the essential chemic agents to supply the organism with when defective or insufficient antidotal substances seem apparent, are to constitute the chief measures of the future. Prospective therapeutics therefore, starting with this, the brightest and best decade in medical history, is to place medicine immovably on the rock of public confidence. This done, the warfare with professional heresies is ended and the victory is ours, and its fruits must endnre while time shall last.

Summarized, the foregoing leads to these conclusions: Materia medica is burdened with a great mass of useless matter that may well be expunged; while that retained, from which we must derive our medicinal measures, is extremely offensive to those to whom we minister—the repulsive qualities of our medicines constitute the sole cause of disaffection and the estrangement of so many from us. It is incumbent upon us to overcome this objection, as so earnestly and justly demanded by our patrons; this can be achieved alone by the general employment of the pure alkaloids, glucosides, and metalloids. Future therapeutics is to rest upon the use of these substances, and to develop a systematized method of applying attenuated virus and electricity.

A thorough knowledge of the chemic elements of the animal organism now being acquired is to suggest and make practicable the use of these substances in neutralizing and modifying disease-processes and supplying the body with such as it may be deficient in.

FISTULA IN ANO.[1]

BY R. H. WORTHINGTON, M.D.,
OF DENVER, COLORADO;
MEMBER OF THE BRITISH MEDICAL ASSOCIATION; RECTAL SURGEON TO ST. LUKE'S HOSPITAL; DENVER.

FISTULA in ano is a very common affection, and one that in many cases may be prevented, if the patient will seek advice early and if the surgeon will act boldly and without delay. By far the larger number of cases commence with an abscess, either superficial or deeply situated in the ischio-rectal fossa. These deep abscesses are far the most serious, and, if not properly opened and drained, the pus is certain to burrow along the fascia and to burst into the rectum, as well as externally, making a deep fistula. With almost any abscess this may be prevented if the surgeon will avoid temporizing and poulticing as is very commonly done, and, instead, open the abscess freely, laying it open from end to end, preferably in a line radiating from the anus. The loculi in a large abscess should be thoroughly broken down, the wound irrigated, and the cavity lightly packed, not stuffed, with gauze, and thereby thoroughly drained. Hot aseptic poultices are useful until the acute inflammation has subsided.

If abscesses are treated in this way, fistula will very rarely occur; but, unfortunately, many patients do not seek advice in time, and too often the surgeon does not use the knife early enough, or freely enough, to obtain the best results. Deeply-seated fluctuation is often difficult to recognize, but it is far better to incise a hard, brawny, inflamed buttock before much pus has formed, than to delay a day after it has begun to break down, as these abscesses often extend and burrow very rapidly.

Fistula sometimes originates within the rectum from perforation of the mucous membrane by ulceration or traumatism. It is one of the several dangers of the injection of hemorrhoids with carbolic acid.

In examining a patient for fistula, he should lie on the side on which the fistula is, on a hard couch or table, exposed to a good light. The external opening is usually easily seen, but sometimes it is very small, and can only be detected by careful search, and by pressing with the fingers outward along the indurated track, so that a drop of pus may be made to exude from the orifice. The track can usually be closely followed by the induration along it, which feels like a wire under the skin, and often extends beyond the opening. A probe passed in at the opening will, if not too large, follow the track along the line of induration into the bowel in a simple case, and may then be felt there on the introduction of the finger, but if the track is tortuous this usually cannot be done, and the internal opening must be otherwise sought for.

If the fistula is found to extend to the mucous membrane, or even to the sphincter, an internal opening will almost always exist, though it may not be found, either at the time of examination or during operation; and if it does exist, and is not found, the operation will probably fail to cure.

Mr. Goodsall has pointed out that when the track of a fistula runs posteriorly to a line bisecting the anus laterally, it will usually be found to enter the rectum in the median line, directly posteriorly, and

[1] Read before the Denver and Arapahoe Medical Society, March 22, 1892.

very frequently between the two sphincters. If, however, it is all anterior to this line, it is more frequently a straight track, entering the bowel directly opposite the external opening.

The internal opening may be large and ragged, in which case there will usually be great pain, and it can easily be felt by the finger in the bowel. More often it is quite small, and feels like a minute dimple, or is elevated above the surface, pouting and soft, feeling very much like a gumboil. This pouting condition is often seen in the external openings of old fistulæ, and the pus exuding from them is thin and watery, with curdy flakes in it. Such a fistula may, if necessary, be left without operation for a time, as it is nearly quiescent, and the pus is not likely to burrow, and make new tracks, unless from some cause it should become inflamed, when the character of the pus will change, become more yellow, and more like the miscalled "laudable pus."

Any fistula is liable to extend and get worse from temporary obstruction of the external opening and the consequent retention of the discharge. Inflammation ensues and burrowing in any direction with formation of more sinuses may result.

The sooner a fistula is operated upon the better, unless it be in a state of acute inflammation. In this case the external opening should be dilated, the patient confined to a recumbent position and hot poultices applied until the inflammation has subsided.

There are a few cardinal rules to be observed in operating:

1. Only one division of the sphincters must be made, and that at right angles to the muscular fibers, and, if possible, the whole of both sphincters should not be divided, or incontinence is very likely to result. When there are two internal openings, it is better to lay open all communicating tracks *up to* the second opening in the bowel, but not to divide the sphincter more than once. If a cure is not obtained by one operation, a second one may be done later, with less danger of incontinence.

2. All tracks must be carefully laid open wherever they go and made to heal from the bottom, the tracks being followed in all their deviations. Exceptions to this rule must be made only in very long, deep fistulæ, opening externally at a great distance from the anus. In such a case an opening should be made in the track near the anus, the proximal portion, including the sphincter, laid open, and the distal portion curetted with a sharp spoon throughout its entire length, rendered aseptic by injections and stimulated to granulation.

3. All undermined and overhanging skin and fat should be freely removed, especially where the skin is thin and livid and lacking in vitality. Granulation goes on much more rapidly if this is done, and the subsequent contraction is less rather than greater.

4. Never make an opening into the bowel, as is advised by many older writers, unless you are absolutely certain that one does not exist. If there is none, it may be possible to cure the case without dividing the sphincter.

5. Tracks running up the rectum, under the mucous membrane, should be laid open as high as they extend. Authors differ on this point, but there is little or no danger in doing it, as hemorrhage can always be controlled if proper means are taken, and the fistula may not be cured if it is omitted.

After the incisions are made, and all the tracks are laid open, I usually scrape away the glistening lining membrane with the sharp spoon. If there is much induration, it is well to make an incision from one-eighth to one-fourth of an inch deep along the track. This is the well-known "back-cut" of the late Mr. Salmon, of London, and wonderfully promotes healing.

With strong, healthy patients there is little danger of cutting too much; in fact, the more you cut the better they seem to do, but with weak, delicate patients, especially with a tendency to pulmonary tuberculosis, or any chronic disease, one must cut as little as possible. This is especially necessary in women, where the sinuses run toward the perineum, as in them the dependence of the sphincter ani upon the sphincter vaginæ must always be remembered with a view of avoiding incontinence when the wounds heal.

In these cases it is, I think, frequently better to attempt immediate closure of the wound by deep sutures passing clear round the sinus, after it has been scraped out and disinfected. If this is to be attempted, the sphincters should be well dilated before incising, so as to insure temporary rest. A careful daily watch must be maintained, and, if pus appears, the sutures should at once be removed, the wound reopened and allowed to heal from the bottom by granulation in the usual way.

Healing by immediate closure may frequently be obtained when there is a single straight track, if the lining membrane and weak granulations in the sinus are thoroughly curetted away, and, if successful, much time will be saved; but if the operation be more extensive, and any lateral sinuses have to be laid open, it will usually fail. Time may be saved when there is a deep incision, leaving a large gap to be filled by granulation, by putting in a few deep sutures, but leaving them untied until granulation has begun, and then partially drawing the sides together, so as to narrow the gap, but not to close it.

After operating I pack the wound carefully with cotton to control the bleeding, and apply an ex-

ternal pad and T-bandage, and encourage suppuration and discharge by means of hot fomentations or poultices about the second or third day, if there is any inflammation. The bowels should be confined until about the fourth day, when a gentle but efficient purge will bring away everything, packing and all, as it will by then have become loosened by the discharges.

It is important, as the wound heals, to pass the finger or probe along its base daily, to break down any bridges that may form, so as to insure its healing from the bottom and to keep it clean. Much judgment is often required in the choice of local applications—sedative, stimulant, or caustic, or a simple bit of lint or gauze, to keep the lips apart. The surgeon must decide on the general treatment of each case on its requirements, and judge when to give stimulants, tonics or purgatives, a full diet or a light one, how long the patient should be confined to bed, etc.

We frequently hear of failure to cure fistula. This is sometimes due to a want of attention to the after-treatment. The wounds have a constant tendency to bridge over, leaving a fistula below, which does not heal and eventually breaks out again. A more common cause of failure is that the internal opening is not found and, therefore, not laid open, or that a small lateral sinus escapes the operator's notice, and he omits to cut it. During the healing of the wound pus must be carefully watched for, and, if more is found than should naturally arise from the granulating surfaces, its source must be ascertained. Some unsuspected sinus, either originally overlooked or in process of formation, is probably the seat of the mischief, and should be slit open at once. If everything is not laid open, failure must result.

Although an operation is indicated in most fistulæ, it is not always so. Some patients decline it, and demand that milder measures be tried. In others, the general state of health prohibits. I shall not now discuss the vexed question of curing fistula accompanying pulmonary tuberculosis, further than to say that, in my opinion, no operation should be undertaken while the lung-disease is at all active, and as long as there are any moist râles to be heard in the lungs. A cough is a decided contra-indication to operation; the succussion gives both pain and delays, sometimes prevents healing. When fistula complicates stricture of the rectum it is quite useless to touch the fistula without previously dilating or dividing the stricture. Kidney-disease puts any operation out of the question, and a man with an enlarged prostate is always a bad subject for rectal operations. Many patients, again, cannot, or will not, afford the time to lie up for the three or six weeks necessary for a cure of a deep fistula.

Fistula has been cured by the irritation caused by passing a probe into it, and sometimes irritating injections set up just the necessary degree of adhesive inflammation to cure, but such cases are extremely rare, and the treatment not at all to be depended upon. Moreover, fistulæ so cured are prone to break down and reopen. Still, such injections may be tried when an operation cannot be done, but should be preceded by forcible dilatation of the sphincters to give the part temporary rest, and, if possible, by curetting the internal surface of the sinus.

When purely palliative treatment is required, the patient must be kept as comfortable as possible, by careful regulation of the bowels, and by keeping the external opening free, to allow the discharge to escape easily. Dilatation by tents, or the insertion of a small drainage-tube, may be necessary to effect this. Allingham advises the use of a bone collar-stud, with a hole drilled through it, slipped into the orifice to keep it open. The parts must be kept clean and dry, and gauze or cotton used to absorb the discharge. A hot linseed-meal poultice, applied every night at bedtime, is very soothing; it allays inflammation and prevents retention of pus (which always gives pain) by promoting a free discharge.

LECTURES VERSUS RECITATIONS IN MEDICAL COLLEGES.

BY HENRY BIXBY HEMENWAY, A.M., M.D.,
OF EVANSTON, ILL.

ACCORDING to an ancient custom, adopted in every regular and well-governed college for medical instruction in this country, most of the didactic teaching is by lectures. Is it wise to adhere to the old system? The lecture was originally the means used for all education. With the progress in the art of printing, and with the advances made in the science of pedagogy in non-professional schools, the lecture has largely given place to the use of text-books. Even in some professional schools—theologic, for example—the lecture is of far less importance than the daily examination from a prescribed text-book. Is it not strange that the disciples of Æsculapius so long continue to use his methods of instruction?

In favor of the lecture-system it must be admitted that when the professor can speak at all fluently, he can make a good impression with less study. He can cover up his own lack of reading, and with a very superficial knowledge of his subject occupy his hour in a pleasing manner. Some time since I heard a didactic lecture upon a subject in materia medica. The speaker spoke easily and occupied his entire time, but he said practically nothing. He told the origin of the drug, and the fact that it had

been used in medicine from very early times. He did not tell the composition, method of preparation, dose, or exact physiologic action. He did give a few of the gross effects of the drug, and named some diseases in which it is used, but failed to give the exact indications for its administration. It would be unjust to regard such teaching as representative of the work of our schools, but similar lectures are given more or less frequently in most of them.

When we say that the lecture was the original form of instruction, we do not necessarily mean that questions were excluded, as they are in modern lectures. On the contrary, that prince of teachers, Socrates, made his lectures far more interesting and effective by frequent interrogations.

It has been claimed for the pure lecture-system that it gives a better opportunity for the teacher to impress his individuality upon the student, but I feel that this is not the truth. The lecturer gives his ideas, and the student absorbs what he can, but is not prepared to recognize what ideas are original. Everyone who has a broad acquaintance with the professional schools must recognize the fact that the best students come, as a rule, from those institutions in which the quiz is a special feature; and, probably, he will further note that he remembers most vividly the instructions received from his quiz-master.

The lecture-system tends to narrow the student's mind. The student rarely knows of what the next lecture is to treat, and so cannot, if he would, look up the ideas of others. After the lecture he is inclined to learn all that he can of the professor's lecture, rather than to spend his time in reading his text-books. In fact, some professors give their students to distinctly understand that they must take their professor's ideas, and not those of other authorities. It is only a small man who would thus give his *ipse dixit*.

It frequently happens that a lecturer is misunderstood, when both the speaker and the hearer suppose that there is a perfect understanding. The error is seldom discovered except by the quiz.

The present method does not at all prepare the student for his life-work. He may practically go to sleep while listening to a dull lecture, or he may be spell-bound by the eloquent speaker. At best, there is a decided feeling of exhaustion after listening to lectures for a few weeks. Original thought or reasoning is reduced to a minimum.

Against the quiz method of instruction it is often urged that it takes too long to get around a large class to devote much time to that method. True it does take time, but, so far as I know, in our professional schools the quiz is not generally utilized in the most profitable manner. A few hurried questions are occasionally asked in regard to the subject of past lectures only.

I would suggest that in our didactic teaching the text-book be more generally used. I remember having provided myself, during my first year at college, with several text-books recommended in the catalogue. In pathology, for example, it was so absolutely impossible to follow the professor with the text-book that the student has never yet been able to wade through the pages of his German author. Having been unable to comprehend the work when studying the subject, he is now afflicted with mental dyspepsia and nausea whenever he reads a few pages of that particular book. The teacher should be a leader, or he is a crammer instead of an educator. He should instruct the student how to read. A poor book as a text, thoroughly mastered, is far better than a good book glanced at. When one text-book on a subject is understood by the student, others can be more easily comprehended.

What is the object of the ordinary lecture on anatomy? It is practically only a recital of a few pages from Gray, and generally less accurate. In histology, chemistry, anatomy, and to some degree in pathology and materia medica, the most profitable work can be done in the laboratory. The student will learn more in less time, and with less fatigue. In other cases, even including as far as possible clinical teaching, an assigned lesson should be given out beforehand. As far as possible, the teacher should make his remarks explanatory and supplementary to the answers of the students. In that way the student is practically obliged to study, and he soon learns to read different authors with discrimination.

If it is a fact that the student remembers most vividly the instructions in the quiz-class; if in the quiz-class the student can most clearly comprehend the ideas of the teacher, is it not a foolish custom to assign the quiz-classes to assistants, sometimes undergraduates. There was a time when the primary school was assigned to the poorest teacher. To-day the best school-boards regard the primary teacher's place as the most difficult to fill. It is to be hoped that a like change will soon be noticed in the general opinion relative to the quiz-master.

He who is fit to enter a medical school should be treated as a man, and not as a sponge. We might learn a lesson at the soda-fountain. In charging the water with carbonic acid gas, high pressure (eminent professors) is not sufficient. A little agitation (quizzing) will cause the water (the student) to absorb many times as much of the gas (instruction).

We would not entirely abolish the lecture-system, but rather revive the method of Socrates, and adapt it to the present time. By the use of text-books

the student may be prepared for the questioner, and the lecture should be limited to discussing with the class disputed points, or emphasizing important subjects.

ANALYTIC NOTES ON COMMERCIAL COD-LIVER OIL EMULSIONS.

BY HENRY LEFFMANN, M.D.,
AND
WILLIAM BEAM, M.D.,
OF PHILADELPHIA.

THE excellence of an emulsion of cod-liver oil depends, of course, upon the proportion of oil present and upon the perfection of the emulsification. The latter condition may be roughly estimated by the facility with which the oil separates on standing, but the proportion present can only be determined by analytic methods. Since these preparations are extensively employed by physicians, it seemed to be of interest to determine the strength of commercial varieties, some of which make definite claims as to quality. The analytic investigations here noted were carried out by the most approved methods for fat-extraction, as applied in milk-analysis. The samples were obtained from a wholesale house and in the original packages. Care was taken to mix each sample thoroughly before making the analysis.

Brand.	Per cent. of oil claimed.	Per cent. of oil found (by volume).	Remarks.
"Williams's emulsion of cod-liver oil with hypophosphite of lime."	50	49.9	
"Phillips's palatable emulsion of cod-liver oil."	50	49.5	Pancreatized.
"Scott's emulsion of pure cod-liver oil."	50	49.5	
"Hydroleine."	66.6	44.2	Pancreatized; contains salicylic alcohol.
"Maltine with cod-liver oil."	30	35.9	Much maltose.
"Baker's emulson of cod-liver oil with hypophosphites.	50	10.7	
" (second sample.)	50	18.0	
"Baker's pure cod-liver oil with extract of malt."	....	8.4	Much maltose.
"Wilber's pure cod-liver oil and phosphates."	....	37.3	
"Wampole's perfected and tasteless preparation of cod-liver oil."	"the curative agents from 25 per cent. pure Norwegian cod-liver oil."	None.	14 per cent. alcohol.

The sample (Wampole's) last-named is accompanied by a circular stating that "the oil in this preparation is in positive solution," and also a certificate from a professional chemist to the following effect: "I have examined the sample which you sent me, marked Wampole's perfected and tasteless solution containing the essential curative agents of cod-liver oil, and I find that it contains combined phosphorus in several forms, and the peculiar principles of wild cherry bark, and it also carries an amount of combined iodine, such as is found in a volume of cod-liver oil equal to 25 per cent. of the solution; that is, one tablespoonful of the mixture carries the amount of combined iodine found in a teaspoonful of cod-liver oil." The sample analyzed by us contains 14 per cent. of alcohol and no appreciable amount of iodine.

It is not inopportune to discuss briefly some of the chemical questions relating to the therapeutic value of cod-liver oil. It is probable that the modern knowledge of causation and nature of phthisis, recognizing it as definitely due to a specific germ, will modify materially the therapeutic importance of such a substance as cod-liver oil, but incidental to the supposed especial nourishing function of the fatty matter, it has often been suggested that some accessory ingredients may be of value.

For instance, iodine has often received credit, but it has been known for a long time that the proportion of this element is extremely minute, ranging from 0.001 to 0.004 per cent. It is evidently impossible to attribute the medicinal value of the oil to the traces of iodine present, unless we are willing to accept the absurd doctrine of infinitesimals. The proportion of iodine in dried cod-fish and in herring, is considerably greater than in the oil.

Theoretic considerations would lead to the view that the best emulsions are those made with pancreatin, in association with the least possible quantity of gum, glycerol, or sugar. The presence of any considerable amount of the more easily fermentable sugars, such as maltose or glucose must be regarded as objectionable. The presence of salicylic acid and of notable proportions of alcohol will be still more serious, for, as we have elsewhere shown, the former interferes decidedly with the action of the pancreatic ferment, and the latter should certainly not be employed except under specific and regulated conditions of dosage. Thus "hydroleine," an otherwise satisfactory emulsion (although not found to contain the amount of oil indicated in the published formula), is objectionable from the presence of salicylic acid, and in the Wampole preparation we have, in addition to the fact that it contains no appreciable amount of oil, the presence of 14 per cent. of alcohol as a most serious drawback to its use.

Dr. Benjamin Lee has been elected professor of Orthopedics at the Philadelphia Polyclinic.

WILL THE GENERAL PRACTITIONER CEASE TO EXIST, AND HIS PLACE BE TAKEN BY SPECIALISTS?

BY JOHN GRAHAM, M.D.,
OF PHILADELPHIA.

IN language written and spoken, we are forcibly informed that this is an age of progress; that old things must give way to new; and that the relentless scythe of Time will hew down everything unsuited to this advanced and advancing age.

Among the many early doomed to extinction, according to some writers and teachers, is a class endeared to all through the memory of bygone days—the general practitioner, the family physician. We are told that he must go, and his place be filled by the specialist.

Some kindly describe him to us. He is always short, very stout, a little past middle life, and wears spectacles. His resources to battle with disease, generally speaking, consist of bleeding, blisters, quinine, and calomel, with an occasional dose of salts. The humorous journals assist in diffusing a knowledge of him.

If this description is a correct one as he at present exists, then, indeed, he must go, for he is no longer suited to his environment; but, as a matter of fact, the good-natured old doctor here described has long since almost disappeared. Like the partridge of Pennsylvania, he exists only in small numbers, in the mountain districts; but his improved type—the practitioner of to-day—holds his place by merit, in this and in every other civilized land, and is here to stay.

Year by year the study of medicine covers a wider field, until now no mind is broad enough, or working life long enough, to enable one to become an expert in all its branches. But, as an army needs a general to guide and direct it; to be thoroughly conversant with the art of war, in all its details; capable of knowing and selecting a good engineer, artillery officer, commissary-general, or corps-commander, and assigning the right man to the right place; so in our battle with the enemy—disease—we need a commander to guide and direct: a man with a broad knowledge of general medicine, and thoroughly posted, by bedside experience, in all its branches. There are plenty of such men, and the wise patient will seek the advice of such first, and, if a specialist is needed, will depend upon the family physician to make the selection.

If my judgment—gained by a somewhat large experience—is correct, the majority of cases, as they come to us, can be best treated by the general practitioner; the minority alone can with advantage be assigned to the specialist.

Most diseases have complications. The patient depressed by a uterine catarrh may, as a result of indiscreet exposure, develop a solidified lung. A pelvic inflammation, as in a case I recently saw, may be but a complication of typhoid fever. Here, a single visit from the specialist is all that is probably necessary. The case will be best managed by the general practitioner.

The advertising quack will not agree with me. His advice is: "Shun the family doctor; come to a specialist—me." How many poor invalids would have saved time, money, and health by having come to the physician first, to have been guided by his counsel. The general public, even when educated, is alone utterly unable to make a proper selection; and, as a matter of fact, the office of the quack is filled with lawyers, clergymen, and men who know everything except medicine.

Our first-class medical colleges graduate yearly hundreds of young men and send them forth thoroughly prepared in all departments of medicine and lacking only experience to enable them to become first-class general practitioners; but, alas, the educated man too often shrinks from physical toil, and the young physician is not attracted to general practice, with its long hours of labor and sacrifice of social pleasures.

The brilliant results recently accomplished in some departments of medicine, notably in gynecology, with the large fees and shorter hours of work naturally attract the young graduate. So great is this tendency that what would ordinarily be for the good and the development of the profession has degenerated into an evil; the specialties more than general practice are becoming overstocked.

No man should embark in a specialty until he has practised medicine for five or six years. He should learn by experience not what branch he likes, but that which he is best adapted to.

I recently heard a teacher say to a mother: "Your son is bright, studies easily, and is industrious, but cannot use his hands." Such a boy might in after-years be successful in the treatment of nervous diseases, but what a failure he would make as a surgeon.

In regard to the gynecologists, I have always thought that their ranks should be filled, not by general practitioners, but by young surgeons—young men thoroughly grounded in the theory and practice of general surgery.

A man of moderate ability, industrious, and conscientious, may lead a useful life as a general practitioner, and will be fairly remunerated for his services; but a specialist with only moderate ability in his branch will be a gloomy failure.

Wilhelm Czermak has been made professor extraordinary of Ophthalmology at the University of Innsbruck.

MEDICAL PROGRESS.

Extra-genital Syphilitic Infection.—The primary lesion of syphilis may be genital; peri-genital, in the genito-crural folds, on the symphysis, in the inguinal regions, on the perineum, on the inner surface of the thighs, in the anal region; or extra-genital, on the skin or mucous membranes remote from the genital region.

During ten years, NEUMANN (*Bericht des k.-k. allgemeinen Krankenhauses für das Jahr* 1890) has observed eighty-eight cases of extra-genital chancre—thirty-seven in males and fifty-one in females. In eighteen cases—six in males and twelve in females—the upper lip was the seat of the lesion. The infection was usually transmitted by kissing. In one case the transmission was by drinking from a glass previously used by a syphilitic; in another case, by a bite; in one case, by the sucking of the lip of the grandmother by a child of a syphilitic father, the mother, who had nursed the child, escaping In twenty-eight cases—nine in males and nineteen in females—the lower lip was the seat of primary lesion. Among the modes of conveyance were kissing and the use in common of eating utensils. In eight cases—six in males and two in females—chancres appeared at the angle of the mouth. In one case, the infection was ascribed to smoking a thrown-away cigar. In two cases, chancres appeared upon the cheek—in one case in a man, in the other in a woman. In the latter the infection was conveyed by kissing. In five cases—four in males and one in a female—the primary lesion appeared upon the chin. The four men were infected through shaving. A male presented a chancre of the posterior wall of the pharynx and of the left palatine arch. The mode of infection was not determinable. Two women presented chancres of the tonsils. One was infected by a spoon. Chancres appeared on the alæ nasi in three cases—two in males and one in a female. In the last, the infection was conveyed by scratching the excoriated nose with the finger-nail, after cleansing a vessel in which a syphilitic had bathed. Two men presented chancres of the eyelids. The fingers and hands were the seat of infection in eleven cases—six in men and five in women. Among the modes of transmission were washing infected linen and a bite. Four chancres were found upon the nipples in women. In two instances, the infection was conveyed by syphilitic infants; in one, by a bite; in one, by the kiss of a syphilitic man. A child presented a chancre of the umbilicus. The mother had been infected in the eighth month of pregnancy. The child had no evidences of infection at birth, but when five months old was infected by the secretion from the papules of the mother. Three women presented chancres of the anus.—*Internationale klinische Rundschau*, 1892, No. 15, p. 603.

Acute Bulbar Palsy of Inflammatory Origin.—VANDERVELDE (*Journal de Médecine, de Chirurgie, et de Pharmacologie*, 1892, No. 14, p. 225) has recorded the case of a man, twenty-four years old, with a history of alcoholism but not of syphilis, who three weeks previously to coming under observation had complained of sore-throat. Twelve days later the difficulty was worse and fever was present. It became necessary to introduce nourishment by means of an esophageal tube. In three days more, tingling had appeared in the lower extremities, with increasing difficulty of progression. Mild attacks of headache, of brief duration, occurred. For several days there had been no sleep. Attempts to arise from bed induced vertigo. There was ringing in the ears. Vision had been impaired for two weeks. The pupils were dilated and unequal; the right was larger than the left; both were sensitive to light. There was bilateral convergent strabismus; the deviation was at first the greater on the right; subsequently it became the more decided on the left. The difficulty of deglutition increased. The uvula was deviated to the right; the velum palati to the left. The mobility of the tongue was unimpaired. The lines of the lower part of the face were obliterated. The nose was drawn to the right. The movements of the extremities were preserved. In walking, the feet were separated; the right leg was dragged; there was a tendency to fall to the right. The mental condition prevented a study of the knee-jerks; later, the right knee-jerk was elicited; there was no ankle-clonus; the cremasteric reflex was preserved; the superficial reflexes were preserved, but enfeebled. The muscular power of the hands, as measured by the dynamometer, was diminished, but alike on both sides. The electric reactions were preserved. The pulse was 140; the respiration 40; the temperature 101.8°. The bowels were constipated. The urine contained neither albumin nor sugar. The condition of the patient steadily grew worse. Dyspnea, cyanosis, convulsions, and coma were followed by death. At the autopsy, inflammation of the ganglion-cells in the anterior horns of the medulla oblongata was found at the level of the decussation of the pyramids. There was slight contiguous involvement of the gray matter of the posterior horns and also evidences of beginning descending degeneration.

The Bacillus of Measles.—CANON and PIELICKE (*Berliner klin. Wochenschr.*, 1892, No. 16, p. 378) examined the blood in fourteen cases of measles, in cover-glass preparations stained with methylene-blue and eosin, and found constantly one kind of bacillus. The organisms were at times uniformly stained; at other times they were more deeply stained at the extremities. They were of variable size; some appeared like diplococci; others were as long as the radius, and still others as long as the diameter of a red blood-corpuscle. In the cover-glass preparations, the bacilli were arranged singly and in groups, with a tendency to lie parallel with one another. The organisms were found throughout the whole course of the disease—in one case, in fact, for three days after defervescence had taken place. They appeared in largest number at the period of crisis. In seven children just recovering from measles, and in one fatal case of uncomplicated measles examined ten hours after death, bacilli could not be found in the blood. The bacilli did not retain the stain of Gram's method. Bacilli resembling those found in the blood were present in the sputum and in the nasal and conjunctival secretion of children with measles. Inoculations of the blood upon glycerin-agar, blood-serum, or human milk, remained sterile. In three cases, inoculations upon bouillon were followed by the development of a bacillus resembling that found in the blood.

The Blood during Treatment with Tuberculin.—In a study of the blood of tuberculous patients being treated with tuberculin, BOTKIN (*Deutsche med. Wochenschr.*, No. 15, 1892, p. 321) found that after the injections an acute leukocytosis became evident, all varieties of the white cells being increased. On the day after the reaction, the number of leukocytes rapidly diminished, the majority probably undergoing destruction, as indicated by an increased number of blood-plaques. This manifestation was usually simultaneous with the maximum decline of temperature usually observed to follow the reaction. The condition is comparable with the blood-crisis of some of the acute infectious diseases that are attended with fever. The changes in the blood may take place in cases in which the temperature does not rise. The increase in the number of eosinophile cells may occur in conjunction not only with chronic cutaneous affections but also with acute transitory exanthems that complicate some therapeutic procedures.

THERAPEUTIC NOTES.

The Treatment of Metrorrhagia.—EDIS (*British Medical Journal*, No. 1630, p. 648) considers the various conditions that give rise to metrorrhagia, and indicates the best means of treatment. When uterine hemorrhage results from constitutional or general conditions, its repression is not always wise. In certain cases of heart-disease moderate uterine hemorrhage seems to relieve the cardiac symptoms. In such cases potassium bromide, with strophanthus, digitalis, or aconite, is indicated. Iron is also useful. If the function of the liver be deranged, attention to diet, abstention from alcohol, encouraging the action of the skin and the administration of a few grains of calomel, followed in the early morning by a brisk saline aperient, will be attended with good results. If disease of the kidneys exists, vicarious action of the skin and bowels, by means of diaphoretics and purgatives, should be encouraged. The reliable remedies available for controlling uterine hemorrhage are few in number. Ergot is one of the most potent; its efficacy is increased by combination with strychnine and cinchona. Hydrastis canadensis is a valuable agent in many cases of uterine fibroid. Hamamelis is useful in some cases. Ordinary astringents, such as gallic and sulphuric acids, have little influence in restraining hemorrhage. Quinine and strychnine, alone or in combination, will often succeed in controlling hemorrhage when the system is depressed, as a result of repeated or protracted loss of blood. Potassium bromide is one of the best remedies in cases of hemorrhagic chlorosis, ovarian irritation, or hematocele. Potassium chlorate and borax, in combination with ergot and cannabis indica, have been recommended. When the hemorrhage has been severe or protracted, opium has a wonderful restorative effect. Combination with quinine or cinchona seems to enhance the value of the remedy. Iron should not be resorted to when the presence of a foreign body in the cavity of the uterus is suspected. On the other hand, when from antecedent anemia, the blood has become so attenuated as to pass readily through the capillaries, and in some cases of intra-mural fibroids, iron does much good. Locally, the hot vaginal douche, at a temperature of from 110° to 115° F., is often of service. In all severe cases absolute rest in the horizontal position, preferably in bed, is indicated. The application of carbolic acid by means of a suitable probe to the cervical canal and even to the cavity of the uterus may, in appropriate cases, control the hemorrhage for a time. Free scarification of the cervix, by relieving congestion, sometimes succeeds in arresting uterine hemorrhage. When, without recognizable cause, uterine hemorrhage persists and ordinary remedies have failed, the cervix should be dilated and the cavity of the uterus explored.

The Mechanism and Treatment of Asthma.—KINNEAR (*New York Medical Journal*, lv, 17, p. 458) expresses the view that the asthmatic paroxysm is dependent upon hyperemia of the pneumogastric center in the medulla induced by various influences. A rational mode of treatment would be directed to the control of the blood-supply of the nervous system. With this end in view, it is recommended that an ice-bag be applied to the spine for longer or shorter periods. Such practice has been attended with good results, immediate and remote, the paroxysm being terminated and concomitant symptoms being relieved.

Gold and Sodium Chloride in the Treatment of Paretic Dementia.—BOUBILA (*Annales Médico-psychol.*, Janv. et Mars, 1892) reports the results obtained in the treatment of paretic dementia by means of gold and sodium chloride, in doses varying from a sixtieth to a twelfth of a grain, morning and night. Curative effects were not obtained. In the first stage, the remissions were favorably influenced; in the second stage, the general condition was improved, the weight and the number of red blood-corpuscles increasing.—*Rev. Gén. de Clin. et de Thér.*, 1892, No. 14, p. 214.

Glycerin in the Treatment of Burns.—GRIGORECU (*Répert. de Pharm.*, February, 1892) recommends the treatment of burns by means of pure glycerin. Several drops are applied to the burned part and gentle friction is employed. At first a sense of smarting is perceived to which a sort of anesthesia succeeds. The inflammation seems thus to be averted; in addition, the desquamation of the epithelium takes place little by little, and the resulting cicatrix is less marked than otherwise. The burned part is to be constantly kept moistened by the glycerin.—*Journ. de Méd.*, 1892, No. 11, p. 134.

Insufflation for Tuberculosis of the Larynx.—

℞.—Menthol	. . . . .	gr. xx-xl.
Pulv. iodoformi	. . . .	ʒiv.
Pulv. acid. boric.	. . . .	ʒiv.
Pulv. calcii phosphat.	. . .	ʒj.—M.

S.—A sufficient quantity by insufflation, morning and evening.—*L'Union Médicale*, No. 42.

Treatment of Erysipelas.—SCHNEIDER (*Centralbl. für Chirurgie*, 1892, No. 15, p. 305) strongly endorses the treatment of erysipelas by the application of a thick coating of collodion in a broad band beyond and surrounding the area of inflammation.

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SATURDAY, MAY 21, 1892.

A COUPLE OF KEELEY IMITATORS.

ACCORDING to Keeleyism, there are now in the United States about 60 recognized or genuine (save the word !) "institutes" and 214 imitation systems at work. The mere statement, together with the very significant fact that even the penny-newspaporial stomach is beginning to turn against the nauseous dose, indicates that the end of the beastly carnival is fast approaching. The "institute" literature is commencing to abuse the newspaper, because sporadically the newspaper, as we have said, begins to feel qualms and weakness at the pit of its stomach —metaphorically speaking. Herein lies hope.

To keep track of this hurly-burly of drunken stupidity and devilish roguery would take a Mephistophelean wit and endless time and patience. Our table is loaded with evidences *ad nauseam*. From the mass and mess we cite a couple of examples, thanking the kind correspondent who has sent us the original letters from which we quote. For the sake of brevity we leave out the flaming letter-heads, with the array of directors, officers, institutes, and branches, etc., and give only the significant portions. Comment is, of course, unnecessary. Filth can scarcely be fouler; the human mind can hardly fall lower. "Thin-skinned ethical sentiment" need only "fire at" them their own boomerangs:

MY DEAR DOCTOR: Your letter of the — is before me. In answer allow me to say a full, free confession is a good thing for the soul. We honor your frankness, and feel better acquainted since receiving your letter.

In reply, permit me to say my thought regarding your relation to us is that you had better wait for a little time, say two or three months, and then I feel very sure that we shall have a branch institute where we shall be glad to place you in charge, with reasonable assurance of a good business before you.

Some capital is necessary to establish a branch, which you do not seem to be ready for, but, when once established, we do not doubt you may be the proper person to take it in charge if your tender conscience can surmount the ethical difficulties.

Regarding these bugbears which seem to frighten your professional timidity, permit me to say I do not cure alcoholism or any other disease with a formula. The treatment is administered according to indications after I carefully individualize my cases.

My treatment has been given to the profession in a general way. My particular methods of compounding drugs are protected by a trade name which, you will observe, is quite colloquial (bichloride of gold[1]) and quite as unscientific as my method seems to be to you.

Of this unprofessional feature I beg leave to say I most heartily agree with you and my brethren in the sentiment that no conscientious physician who is worthy of his title in that high office will withhold any good thing from those to whom it is due.

Of this particular treatment, however, I must say it is very peculiar to itself. The disease is unlike any other, the successful treatment of it depending quite as much upon methods as matter. We do not believe it could be successfully handled in a general practice.

We also feel certain if all we think we know were thrown wide open to the public, great harm would come of it. The above remark may seem to say, by implication, we are wiser than others, but not so, good brother.

Any man who has brains enough to have honestly won the title of M.D., and has been reasonably favored by the great Father of us all with a peculiar adaptability to this strangely peculiar work, may do all that we have done if he will "sweat the great drops of blood falling down to the ground," that have made us gray in the last seven years; he too may be conscious of bearing some humble part in rescuing the perishing, though he may be criticised by those who have neither the patience or skill, good sense or conviction to do a like grand work.

[1] In another letter the writer says: "Regarding 'bichloride of gold,' criticised by the Editor of THE MEDICAL NEWS, November 14, 1891, permit me to say he is correct in saying that, chemically speaking, there is no such thing as bichloride of gold in stable solution. The term is one used in the market to indicate the chloride of gold and sodium. It is in this sense that we use the term."

When we are thus fully understood by members of the profession, we are quite ready to suffer any criticism which their thin-skinned ethical sentiment may fire at us.

Yours to rescue the perishing rather than please sentimental notions,

—— —— ——, M.D., *Pres.*

Fearing this, from the professional standpoint, may be inconclusive, the business agent of the company thus writes on the following day:

DEAR SIR: Let us, from the business office of the company, add a word supplementing what our Dr. ——— has already said to you.

If the doctor has not convinced you of his not unprofessional attitude, it cannot be contrary to medical ethics if you should offer some of our shares to the people of your community, and so give us the opportunity to pay you a full agent's commission of 10 per cent. on the par value of the shares you sell. Please take this under consideration.

We know the doctor is correct in his position, yet some of the more strict sect may not coincide with us.

The doctor feels that you can be of service to the company, and to himself individually, and we hope that you will be able to see your way clear to join us in our view of the doctor's position and take hold with us.

In any event please let us hear from you regarding the sale of our shares.

Yours truly,

—— —— —— ——

Printed blanks for subscription are enclosed; notices to stockholders of great dividends sure to follow, and "dodgers" promising fortunes, assuring in tremendous capitals that this is "a splendid investment for women," etc. etc. Then follows a typewritten extract from "a confidential letter sent to shareholders (sent herewith for your information)":

We are warranted in giving the most positive assurance that our shares must pay, as an investment, far better than the stock of the most successful business corporations.

We say confidentially to those who are likely to be interested with us as shareholders, that our profit on every case treated for alcoholism is over $50. This alone, you will see, should enable us to pay dividends of from 25 per cent. to 40 per cent., and this is not our only source of revenue. We are establishing branch institutes, and soon will have them in every State. These branches are under our control, and will pay us a certain price for every case treated, so that in the course of a few months our income from this source alone will be very large. This income from the two sources, you will understand, comes to our stockholders in the form of dividends.

We need say nothing here of the moral and benevolent aspect of our work, more than that we are doing a great service to humanity in reclaiming the drunkard, and that fact is recognized and made a valuable aid in the furtherance of the sale of our stock.

It may interest you to know something of Dr. Keeley's experience at Dwight, Ill. His balance-sheet for last year showed a net profit of $1,400,000.

P. S.—The large number of patients already under treatment at our Institute justifies our Board in saying to our stockholders that a quarterly dividend of not less than 3 per cent. will be declared, payable on the coming 1st of July.

From the "Headquarters" of another "—— —— Cure Co." comes the following letter:

DEAR SIR: You are doubtless aware of the wonderful success that Dr. Keeley has had with his famous Gold Cure for Opium, Morphine, Tobacco, and Liquor habits, which is without a doubt the most wonderful discovery of the age.

Dr. Keeley, within the last few years, has amassed an immense fortune through this safely guarded secret, but we have now decided to give to reputable physicians only the benefit of long research and careful study, that they may be as successful in benefiting humanity as Dr. Keeley has been, for we now offer you a complete full formula of the famous Chloride of Gold Cure and at a moderate sum. Our idea in charging a price for this formula is to prevent its falling into the hands of unreliable practitioners and others who might use it to the detriment of humanity rather than a benefit, while at the same time we have endeavored to make the price so very reasonable for so very valuable a secret, that it is within the reach of all reputable physicians.

By this plan the number of patients treated will be infinitely increased, as there are thousands who would take advantage of this treatment, but will not face the publicity of treatment at an institute; such would consider it a Godsend to be treated privately at home by their own physicians. We expect the returns from the number of patients cured to be ample compensation, it being an acknowledged fact that the number of patients cured by the Chloride of Gold treatment is about 99 per cent.; as figures can't lie, you can readily see that much of the talk against this famous remedy has been made by people jealous of the success of others.

For the good of suffering humanity, we want this formula to be used only by physicians of good repute, and as we know you to be such, we take pleasure in offering you the formula for the famous Chloride of Gold Cure for one hundred ($100.00) dollars cash, and a royalty of five ($5.00) dollars for each patient cured by the use of Chloride of Gold during two years from date of acceptance of contract.

We bind you in no way, more than the signing of the enclosed simple contract, depending upon your known good character for the fulfilment of the same.

There is not only a fortune within your grasp, but an opportunity to make yourself an additional blessing to humanity.

Should you desire an exclusive territory, we can make arrangements for the same, but if you don't

wish to take advantage of this considerate offer, kindly let us know at once, that we may make other arrangements.

Trusting you will give this your earliest attention, we are,

Fraternally yours,

— — — — —.

JAUNDICE.

ONE by one the distinctions that apparently separate jaundice into two forms have been dissipated. As long as it was contended that bilirubin, the coloring-matter of the bile, was not formed, but only separated in the liver, or that it could be formed elsewhere, and especially in the blood, the distinction between hematogenous and hepatogenous jaundice could be reasonably maintained. Now, however, that investigation has demonstrated the fact that bilirubin is created by the hepatic parenchyma out of materials brought to the liver by the blood, the distinction becomes invalid and only a hepatogenous form of jaundice can be recognized. It is admitted that hematoidin (which occurs in old blood-extravasations) and bilirubin are identical, but the former is never present in quantities large enough to occasion the manifestations of icterus. The absorption of hematoidin may be followed by increased production of biliary coloring-matter or by discoloration of the urine, but neither nor both of these conditions constitute jaundice.

The hepatogenous character of jaundice dependent upon evident obstruction of the biliary passages is capable of ready explanation. Bile is secreted under blood-pressure so low that but little diminution of the pressure or but little resistance to the discharge of bile is necessary to bring about resorption, the pigment being deposited in the various textures of the body and giving rise to jaundice. The difficulty was encountered in endeavoring to explain the mechanism of the jaundice that occurs, for instance, in acute yellow atrophy of the liver, in phosphorus-poisoning, in yellow fever, in so-called Weil's disease, and in other constitutional affections. In these no cause of biliary obstruction was apparent, and, in the absence of other recognizable cause, the jaundice was dubbed hematogenous. It now appears, however, that even in these the jaundice is actually obstructive. By careful experiments carried on with wonderful persistence for a long period of years, STADELMANN (*Der Icterus und seine verschiedene Formen*, etc., FERD. ENKE, Stuttgart, 1891) has succeeded in demonstrating that in many of the conditions in which jaundice exists without apparent obstruction there is really a catarrhal condition of the ultimate biliary radicles, so that the process is one of resorption, and hence hepatogenous.

Under certain conditions, especially such as are attended with disintegration of the blood and hemoglobinemia and hemoglobinuria, it may happen that the biliary coloring-matter is secreted in excess, a state known as polychromia or pleiochromia resulting, in consequence of which jaundice may develop. The mechanism in these cases is, as in the others, really hepatogenous or resorptive. If bile is secreted in excess the condition is known as polycholia. This, however, is not necessarily attended with jaundice.

Some of the symptoms associated with jaundice are dependent upon the absence of bile from the intestine. Among these are the deficient peristalsis and constipation; the fermentative changes in the intestinal contents, which, in consequence, are more than usually offensive in odor and which sometimes occasion diarrhea; the stools are pale in a degree proportionate to the completeness of the interference with the entrance of bile into the intestine. Other symptoms, like the depression of the temperature, the slowing of the heart, the itching of the skin, are attributable to the presence of the biliary acids in the circulation. In the cases in which more profound and especially cerebral symptoms are present, these may be ascribed to the primary factor in the development of the jaundice, be that infection or intoxication.

SELECTIONS.

STATE AID FOR THE PAN-AMERICAN MEDICAL CONGRESS.

IN the previous issue of the *Medical Record* will be found the circular of information of the Pan-American Medical Congress, issued March 17th, which we advise all our readers not only to peruse but also to keep for reference. If they do not keep it the chances are that, as the time for the meeting approaches, they will wish to recall some of the provisions there laid down, and then they will remember our advice and wish they had acted upon it.

As is there stated, the Congress has been incorporated under the laws of the State of Ohio. This we cannot but regard as a very wise and useful measure, although we believe the American Medical Association has existed for a number of years without having been made a corporate body. The incorporation was at the instance of

a well-known statesman, who recognized the public and political (not partisan) importance of such a drawing together of men of science from the two Americas, and who believed that the general Government would aid the undertaking in a substantial way were there a body corporate legally empowered to receive and disburse money.

Concerning the propriety of Congress making an appropriation to meet the needs of this meeting there can be, it seems to us, no question. It is an unfortunate fact that the Southern Republics and ourselves have been too great strangers to each other. We are of different races, and hitherto the only bond of union between us was that of a common sentiment in favor of liberty—an abstract idea, and one good for orators to declaim about, but really a pretty fragile bond to unite two such dissimilar peoples. The only way in which true friendship and mutual respect and liking can be promoted between the different nations of this continent is by mutual exchange of visits and consequent personal contact of the individual members of these nations. Nothing is so likely to bring about such acquaintance and promote reciprocal good feeling as a Congress of this kind, where all meet on the neutral ground of science, political animosities and social prejudices being laid aside and forgotten. It will not only benefit medicine, but it will directly benefit this whole country, and every other country in America which may send delegates to Washington.

It is, therefore, no more than just that the National Congress should aid the physicians who have undertaken this work. We should be in a condition to receive our guests in a becoming manner and to do them honor. As is seen in the regulations, the foreign members are to be charged no fee for registration, the total expense falling upon members residing in this country. It cannot therefore be said that the physicians in the United States are seeking to throw the entire burden upon the country. But as the nation will benefit by the holding of this Congress in 1893, it is but right and just that it should also contribute to make the Congress a success in every way, financially and socially, as well as scientifically.—*The Medical Record.*

DRUG MANUFACTURERS AS MEDICAL TEACHERS.

THERE is a legitimate field for manufacturing pharmacy, and with regard to it we have naught but words of praise. It is legitimate, it is necessary, that there shall be special workers to supply in the purest quality, and in the best forms, the substances which clinical and scientific research have shown to be useful in the management of disease. But these substances must wait the demand for them. For a manufacturer to attempt to create a fictitious demand for his products by assuming the rôle of medical instructor, is an insult to the profession and a special insult to each individual practitioner to whom he sends his circular. As we see, such men do not hesitate to manufacture explanations of pathological conditions which will apparently favor the use of their remedies.

How absurd it is for men engaged in commercial pursuits to attempt to solve the great and intricate problems of medicine, and how criminal it is to permit the statements of such interested parties to have the slightest weight in deciding questions of treatment.

These are the firms who send drummers out to assist physicians in their work. There is nothing more aggravating than the representative from such houses. He is frequently a doctor who has failed in his own profession, or who has not yet entered upon it, or else a drug clerk, or a man who has already proven himself successful in selling new lines of stoves, or boots and shoes. And yet these very men attempt to instruct medical men on physiological and pathological points, and means of treatment, when they have once succeeded in forcing themselves upon their attention.—*Journ. Am. Med. Assoc.*

CORRESPONDENCE.

NEW YORK.

LOOKING back over the work of the medical societies here during the past winter, I recall the fact that the important subject of urinary analysis has received attention in two important discussions. The first occurred before the Post-graduate Clinical Society in the early part of the season; the second took place only a few days ago at the last stated meeting of the Academy of Medicine.

On the former occasion, the discussion was opened with an elaborate paper by Dr. W. H. Porter, giving extensive original studies in physiologic chemistry. The general opinion expressed by those who followed in the discussion, was that it was unsafe to look lightly upon the occurrence of albuminuria, for, while admitting that this condition was produced by extremes of heat and cold, and by various derangements of the circulatory system, it should ordinarily be looked upon as a "danger signal."

Granular casts, according to Dr. F. R. Sturgis, mean granular degeneration not only in the epithelium, but in the kidney. When the training of athletes was less thoroughly understood than now, it was not uncommon to find numerous hyaline casts in the urine of those undergoing the training, until they had become inured to its hardships, yet this was apparently only a very evanescent condition, and left no subsequent traces of its presence.

Dr. C. L. Dana had found the urine of neurasthenics usually voided in large quantities, it had a low specific gravity, and contained an increased proportion of the earthy phosphates. He had carefully studied the fluctuations in the quantity of chlorides present in cases of pneumonia, and while he acknowledged their general relation to the inflammatory process, he thought the other clinical phenomena much more trustworthy guides.

Having read and heard so much about the value of the gonococcus as a means of differential diagnosis between a simple and a specific urethritis, I was surprised to hear such eminent men as Dr. R. W. Taylor, Dr. F. R. Sturgis, and Dr. F. Ferguson unite in denying that this organism had any such value; and they argued in support of their position, that five other microörganisms had been found present in the gonorrheal discharge, and careful experiments had

shown that in the urethræ of children or of those who had never had gonorrhea, the so-called gonococcus was present. In short, they considered that the position assumed by Neisser and his followers, that the presence of this organism in a discharge brands it as of gonorrheal origin, was likely to prove unjust and injurious to many innocent persons, and would eventually place the medical profession in a ridiculous light.

In the recent meeting at the Academy, Dr. Andrew H. Smith spoke of a reaction between ether and urine, which he thought was entirely new and opened up a promising field for study. He had accidentally observed the reaction in the course of some experiments that he had made with the object of differentiating serum-albumin from other forms of albumin in the urine. When sulphuric ether is very thoroughly mixed in a test-tube with most specimens of urine, the whole mass becomes foamy, and if the tube be well corked, and set aside for some hours, it will be found that the tube contains a firm, opalescent, gelatinous plug. From the fact that this reaction is usually absent only in the urine of persons who have been fasting for many hours or who have been on a restricted diet, such as a milk-diet, it seemed probable that this material separated from the urine by the ether represented the excess of proteids taken into the blood. If the urine be albuminous, the reaction with ether is still obtained, provided the person be on a liberal diet; but if not, it will only appear when the albumin is removed by heat and nitric acid, and the filtrate tested with the ether. Dr. Smith suggested a possible explanation, founded on the knowledge obtained by this reaction, of the occurrence of anuria after prolonged etherization, viz., that if the operation be performed a number of hours after a meal, or, in other words, at a time when the blood contains a maximum quantity of the products of digestion, the ether, as it is excreted from the kidneys, may cause a plugging up of the uriniferous tubules with this gelatinous material.

Another important discussion was that before the Section on Pediatrics of the Academy, on the Therapeutics of Diphtheria. It requires almost as much patience and forbearance to attend a discussion nowadays on this subject as to attend one on the treatment of tuberculosis, but nevertheless your correspondent felt fully repaid for his effort on this occasion, for besides hearing an expression of opinion from a number of those whose experience and judgment add weight to what they say, there were a few little kernels garnered from the usual amount of chaff that seemed, in the writer's humble opinion, to have a positive practical value.

Dr. Joseph E. Winters advocated irrigation with large quantities of *weak* disinfectant solutions, special care being taken to avoid irritating the adjacent tissues, and so rendering them vulnerable to the onslaught of the Loeffler bacillus, and also to carry out the washing in such a manner as to cause the minimum amount of discomfort and exhaustion to the patient. His method consists in using a Davidson syringe with a nasal tip, and injecting, preferably, in most cases, through the nose, a saturated solution of boric acid or a ten per cent. solution of hydrogen dioxide, from a half to one pint of solution being used each time. In very severe cases, when it seemed advisable to wash out the mouth, he attached to the syringe a rubber tube or soft catheter, which was then passed as far back as the last molar tooth. The patient could be placed on the side, and the bedding be protected with a rubber cloth, arranged so as to carry off the fluid. He believed also in inhalation of steam, and for this purpose nothing was better than the ordinary Arnold steam-sterilizer with the croup-kettle attachment; but whatever form of kettle be employed, it is absolutely necessary that two or three feet of large rubber *hose* be used to conduct the steam from the kettle to the patient. He recommended adding two drams of oil of eucalyptus and two ounces of turpentine to the water in the kettle. He laid great stress on the advantage to be derived from the inhalation of the fumes of burning sulphur, and stated that it relieved the inflammatory swelling, the dryness of the throat, and the painful deglutition, much better than did either steam or cocaine. One remarkable feature of this treatment is that the patient often experiences great relief when the air of the sick-chamber is so laden with sulphurous acid as to make it unbearable for the attendants.

Dr. H. D. Chapin spoke of the obstacles that are encountered in endeavoring to carry out proper disinfection and quarantine in limited apartments, and he said that almost incalculable good would follow the establishment by the municipal authorities of stations or places of refuge for the well children in families stricken with the disease. He advised that the attendant should have an outer garment to wear only in the sick-room, that all rags soiled with secretions should be burned, and that after the termination of the case, pillows, comforters, and like articles, should be thoroughly beaten on the roof, and exposed for many hours to the sunlight and fresh air. Floors and ceilings should be washed with a 1 : 1000 solution of corrosive sublimate, and papered walls wiped down with stale bread-crumbs.

Dr. C. W. Allen called attention to the very prudent practice in vogue in Europe, of interposing a glass plate between the physician's face and the patient while local applications or examinations are being made, thus avoiding the lodgment of particles of secretion in the physician's eyes, or upon his face or beard, and so not only protecting him, but diminishing the chances of his carrying the disease to others.

Dr. L. Emmett Holt said that sick children were most commonly over-fed and over-stimulated. Milk, beef-juice, mutton-broth, wine-whey, oatmeal and barley gruels furnish a sufficiently varied dietary, and these articles are much less likely to disagree with the stomach than ice-cream or wine-jellies. When forced feeding becomes necessary, the rectum cannot be depended upon; it is better to use a soft-rubber catheter introduced through the nose and attached to a funnel.

Dr. Abraham Jacobi again declared his steadfast belief in the efficacy of the mercuric chloride treatment, and dwelt upon the importance of recognizing the first flutterings of the pulse that predict the occurrence of dangerous heart-failure unless the practitioner heeds the warning, and without delay resorts to the bold but judicious use of cardiac stimulants.

While the usual amount of good scientific work has been done in the Academy of Medicine this season, the even tenor of its way has been somewhat disturbed by murmuring and dissension. It began with an arraignment by Dr. R. W. Amidon, in a public letter, of the

methods pursued by the officers of the Academy, particularly in regard to the manner of conducting the discussions. He complained that to the announcement of the reading of an important paper, or the occurrence of a special discussion, were appended the names of several gentlemen who were to participate in the discussion, and that not only were so many members thus assigned to take certain parts in the discussion that there was practically no time left for others to join it, but usually the same gentlemen figured in this way for every important discussion in the branch with which they were especially identified. While anyone who is a constant attendant at the meetings of the Academy and of its Sections knows this to be true, the remedy is not so apparent, for the object of assigning certain members to certain topics is to prevent prolix and irrelevant discussion. It has certainly done away with much loose and ill-considered debate, but it has not disposed of irrelevant talk, as those invited to "open" the discussion come with papers already prepared, and deal with many points not directly bearing upon the subject in hand. There seems to be no doubt but that this plan, which has been in vogue for some years past, draws out a larger attendance and a more valuable discussion; but, on the other hand, it does not give a proper opportunity for the young blood to assert itself.

The present policy of the authorities is probably the wisest under the circumstances, namely, to continue to assign certain men to "open" the discussion, but to limit this number so as to give ample opportunity for others to take part. There have been other troubles, chiefly in regard to the increase in the annual dues, but this is hardly a matter of sufficient general interest to warrant a place here.

I recently heard an amusing incident illustrating the wonderful delicacy of a blind person's sense of touch. In a large dispensary patronized by many Italians, and consequently where those whose duty it is to take the money are constantly on the alert for counterfeits, an exceedingly clever counterfeit dime was accepted as genuine, and later on was given out in change to one of the dispensary physicians, who also failed to notice that it was a spurious coin. Curiously enough, however, when this physician handed out the dime to a blind paper-dealer, the latter instantly returned it with the remark, "It's no good;" and careful examination showed that the poor blind man was correct.

DETROIT.

The Coming Meeting of the American Medical Association—The City ready for its Visitors—The Michigan State Medical Society—The St. Mary's Hospital—The late Dr. C. B. Gilbert—A Single Fare to Detroit.

DETROIT, which was recently described by a New York medical journal as "a beautiful city of 100,000 inhabitants, situated on Lake Erie," is just now the cynosure of medical eyes. The city is beautiful enough—none more so—but its population is 250,000, and it is situated on the Detroit River, a broad, expansive strait, which connects Lake Erie with Lake St. Clair. It derives its present medical importance from the fact that early next month the American Medical Association will hold its annual meeting here. Visitors from the East and South will be much delighted with the appearance of our city in the month of June, for Detroit at this time of the year is an ideal summer residence. The capacious steamers that ply up and down the stately stream that flanks its southern boundary will, no doubt, during the evenings of the week of the meeting, be crowded with physicians, who will doubly appreciate the invigorating breezes and picturesque scenery after the toils of the day spent in the sections of the Association.

Everything is ready for the reception of our medical visitors. The Committee of Arrangements is jubilant with the prospects of success. "We have the ships, we have the men, and we have the money too." The ships will be used for excursion purposes, and it is hoped that every visitor will be given the opportunity of visiting one of the river-resorts and feasting on the chickens and frogs that flourish so bountifully hereabout. The men will be on hand in the sections of the Association. A full and complete program is assured. Indeed, the Detroit meeting will be an epoch-marking one for the Association. For the first time in its history two working sessions will be in force, and at these sessions papers will be read and demonstrations made by some of the most eminent and renowned men in the country. The American Medical Association will show itself in its highest and best form—as a congress of specialists bound together by fraternal and professional ties.

The Michigan State Medical Society held its twenty-seventh annual meeting in Flint, May 5th and 6th. The weather was exceptionally bad, and this somewhat affected the attendance. The Society, however, has an inherent vitality of its own that no such trivial cause as bad weather can depress. The sections were well represented and more real scientific work was accomplished than ever before in the history of the Society. The *Transactions* of the Michigan State Medical Society has been pronounced a credit to the State by so competent a judge of such matters as THE MEDICAL NEWS.

The St. Mary's Hospital, which has recently opened a new wing, has been benefited financially by the profits accruing from a flower-show, which was held last week.

The local profession has recently sustained a loss in the death of Dr. Caleb B. Gilbert. Dr. Gilbert was an able and successful practitioner, and a scholarly and refined gentleman. His "Metaphysics" will be long remembered.

The single fare, which has been secured from the railroads for delegates to the American Medical Association, ought to supply an economic motive—if that were needed—sufficient to induce Eastern physicians to visit Detroit. There are many other inducements, and it is hoped that not the least of these will be the sincere and hospitable welcome the profession wishes to extend to all its coming guests.

NEWS ITEMS.

Program of the Section on Surgery and Anatomy of the American Medical Association.—

Tuesday, June 7th.—Afternoon Session.

1. Address of the Chairman. "Surgery of the Gall-bladder and Ducts," by J. McFadden Gaston, Atlanta,

Ga. 2. "Obstruction of the Cystic Duct, with a Case," by W. H. Myers, Fort Wayne, Ind. 3. "Peritonitis from Gall-stones," by W. E. B. Davis, Rome, Ga. Discussion opened by A. Vander Veer, Albany, N. Y.; F. W. Ross, Toronto. 4. "Gunshot Wound of the Liver and Stomach; Laparotomy; Recovery," by James T. Jelks, Hot Springs, Ark. 5. "Eight Cases of Esophageal Stricture," by D. S. Campbell, Detroit.

Wednesday, June 8th.—Morning Session.

6. "Intestinal Obstruction," by Dudley P. Allen, Cleveland, O. 7. "Intestinal Obstruction and its Treatment," by H. H. Mudd, St. Louis, Mo. 8. "Comparative Test of Anastomotic Devices," by John D. S. Davis, Birmingham, Ala. 9. "A Clinical Contribution to the Operative Treatment of Acute Intestinal Obstruction," by Nicholas Senn, Chicago, Ill. Discussion opened by S. McMurtry, Louisville.

Afternoon Session.

10. The Comparative Methods of Inguinal and Rectal Colotomy," by J. M. Mathews, Louisville, Ky. 11. "Intestinal Lesions in Abdominal Surgery," by Joseph Price, Philadelphia, Pa. 12. "On the Treatment of Injuries of the Abdomen not requiring Surgical Operations," by J. Schenck, Mt. Carmel, Ill. 13. "Emergency Work in Abdominal Surgery," by Mordecai Price, Philadelphia, Pa. 14. "Herniæ: Operable and Inoperable," by T. H. Manley, New York, N. Y. 15. "A Few Points in the Management of Strangulated Hernia," by W. B. DeGarmo, New York, N. Y. 16. "Illustrations of Methods of Operating in Hernia," by H. O. Marcy, Boston, Mass.

Thursday, June 9th.—Morning Session.

17. "The Cremasteric Reflex in Varicocele," by T. A. McGraw, Detroit, Mich. 18. "Experimental Researches in the Implantation of the Ureters into the Rectum," by R. Harvey Reed, Mansfield, Ohio. 19. "Visceral Phlebotomy," by George Harley, London, Eng. 20. "Advances in Aseptic Surgery," by F. J. Thornbury, Buffalo, N. Y.

Afternoon Session.

21. "Operative Procedures at the Base of the Brain," by Ernest Laplace, Philadelphia, Pa. 22. "Gunshot Wounds of the Cerebrum," by C. E. Ruth, Muscatine, Ia. 23. "Air in the Veins," by Edward Martin, Philadelphia, Pa. 24. "Total Excision of the Lower Jaw for Malignant Disease," by C. B. Nancrede, Ann Arbor, Mich. 25. "Cosmetic Surgery of the Nose," by J. B. Roberts, Philadelphia, Pa. 26. "Notes on the Diagnosis and Treatment of Lepers," W. T. Corlett, Cleveland, O. 27. "The Treatment of Infected Wounds of the Extremities by Continuous Immersion," by F. Jenner Hodges, Anderson, Ind.

Friday, June 10th.—Morning Session.

28. "Neurectomy of Great Sciatic Nerve; Removal of Astragalus for Talipes Equino-varus; Removal of Salivary Calculus; Amputation of Scrotum and Prepuce for Abnormal Condition of the Skin," by R. Merill Ricketts, Cincinnati, O. 29. "Tracheotomy in Reference to Foreign Bodies in the Air-passages," by W. F. Westmoreland, Atlanta, Ga. 30. "Forced Respiration; Fell Method of Face-mask and Tracheotomy in Diphtheria; Report of Case," by George E. Fell, Buffalo, N. Y.

Afternoon Session.

31. "The Modern Treatment of Gonorrhea and its Complications," by J. J. Darby, Columbia, Ala. 32. "A Rational Treatment of Enlarged Prostate, founded upon its Pathology," by Ernest Laplace, Philadelphia, Pa. 33. "Methods of Examination of Diseases of the Joints," by W. R. Townsend. 34. "Treatment of Compound Fractures," by W. H. Myers, Fort Wayne, Ind. 35. "Diseases of the Knee-joint and Hip-joint," by J. C. LeGrand, Anneston, Ala. 36. "Amputations in the Light of Mechanical Science *versus* Prothetical Science, illustrated with artificial limbs," by S. L. McCurdy, Dennison, O. 37. "Antiseptic Physiological Surgery," by John L. Link, Terre Haute, Ind. 38. "The Radical Cure of Hydrocele, by a New Method," by H. O. Walker, Detroit, Mich.

Section of Ophthalmology of the American Medical Association.—The following is a list of the papers promised the Section of Ophthalmology of the American Medical Association, for the meeting at Detroit, June 7, 8, 9, and 10, 1892.

Dr. Dudley S. Reynolds: Gradation of Lenses. Dr. W. Cheatham: Some Peculiar Cases of Astigmatism. Dr. H. V. Würdemann: What May be Considered Normal Corneal Astigmatism, with Results from Keratometric Examination of One Hundred Emmetropic and One Hundred Ametropic Pairs of Eyes. Dr. B. Alexander Randall: A Study of the Eyes of Three Hundred and Fifty-seven Boys in the Penn Charter School, of Philadelphia, with Notes on the Examination of School Children. Dr. Edward Jackson: Latent Hyperopia. Dr. A. E. Prince: The Fourth Degree Prism in the Correction of Hyperphoria. Dr. George T. Stevens: On the Relations of the Motor Muscles of the Eyes to Certain Facial Expressions. Dr. E. J. Gardiner: On the Treatment of the Anomalies of the Ocular Muscles. Dr. C. J. Lundy: Eye-strain and its Relation to Functional Disorders of the Nervous System. Dr. Louis J. Lautenbach: What Rules Shall We Adopt in Prescribing Cylinders for the Relief of Asthenopia? Dr. J. A. White: Immature Cataract and the Best Method for Hastening Maturity. Dr. A. J. Ervin: Treatment of Incipient Cataract. Dr. H. Knapp: Method and Results of Simple Extraction. Dr. A. R. Baker: Pathology and Treatment of Infantile Cataract. Dr. George Friebis: Case of Congenital Ectopia Lentis. Dr. B. L. Milliken: Injuries to the Lens, with Cases. Dr. Charles A. Oliver: Clinical History of a Case of Successful Extraction of a Piece of Steel from an Iris and Lens by an Iridectomy, with Subsequent Absorption of the Lens Substance and Recovery of Normal Vision. Dr. T. E. Murrell: Eye Injuries Considered in Relation to Sympathetic Affections. Dr. J. J. Chisolm: The Advantages of Optico-ciliary Neurotomy Over Enucleation. Dr. J. E. Weeks: Surgical Treatment of Trachoma. Dr. Eugene Smith: New Operation for Trichiasis and Distichiasis—Galvano-cautery. Dr. F. C. Hotz: Thiersch's Skin-grafts in Ophthalmic Surgery. Dr. Edward Jackson: Osteoma of the Orbit; Removal, with Preservation

of the Visual Functions. Drs. J. A. White and W. M. Gray: Orbital and Ocular Growths, with Report of Three Cases. Dr. J. G. Carpenter: Tumor of the Cornea. Dr. Robert D. Gibson: Treatment of Keratoconus by Means of the Galvano-cautery and Iridectomy. Dr. H. Gradle: The Etiological Relation of Nasal Anomalies to Diseases of the Eye. Dr. Leartus Connor: Heterophoria as a Cause of Rhinitis. Dr. S. D. Risley: Conservatism in the Treatment of Disease of the Lachrymal Passages. Dr. Charles Hermon Thomas: An Operation for Stricture of the Lachrymal Duct. Dr. H. M. Starkey: The Treatment of Epiphora. Dr. Thomas H. Fenton: The Value of Biniodide of Mercury in the Treatment of Eye Diseases. Dr. H. Ernest Goodman: Clinical Methods at Wills Hospital. Dr. G. M. Gould: A Method of Infection and Prophylaxis of Purulent Conjunctivitis. Dr. G. C. Savage: Poultices in Ophthalmic Practice. Dr. R. Tilley: Monocular Diplopia. Dr. W. Oliver Moore: Hysterical Blindness in the Male. Dr. J. F. Fulton: Treatment of Detachment of the Retina. Dr. S. C. Ayres: Embolism of the Central Artery or Thrombosis (?), with Report of an Interesting Case. Dr. G. E. de Schweinitz: Embolism of the Central Artery of the Retina, with the Report of Three Cases. Dr. R. Tilley: Report of a Case of Zonular Atrophy of the Choroid. Dr. J. L. Minor: Diseases of the Eye of Malarial Origin. Dr. William Dickinson: Total Decussation of the Optic Nerve at the Chiasm (Probably). Dr. Charles W. Kollock: The Eye of the Negro.

Dr. J. L. Thompson, Indianapolis, Ind., *Chairman.* Dr. G. E. de Schweinitz, Philadelphia, Penna., *Secretary.*

The Medical Guild of Misericordia is a society of medical men, practitioners, and medical students interested in the work of mercy for the sorrowing and suffering. The Guild comprises an order of brothers and associates—the former communicants of the Episcopal Church and the latter members of any Christian denomination. The Misericordia is designed to develop, so far as possible, the invaluable opportunities which exist for extending Christ's kingdom on earth through the aid of medical missionaries. Members of the Guild obligate themselves to engage in any or all of the above works whenever occasion offers, and to consider it their especial duty to watch for opportunities of so doing. In a word, the object of the organization is to impress upon and keep before the minds of its members the duty of doing works of mercy, both spiritual and corporal, whenever it is possible. Wherever there is suffering, there is our opportunity. The Misericordia is designed to promote the spirit that is suggested by the name, and that cannot be put into the form of absolute rules; at the same time it can be made an obligation on the part of its members to be on the lookout for occasions to exercise the virtue of mercy to all who are in suffering or affliction, for Christ's sake. It also aims to afford professional relief in urgent cases to the worthy poor. The Guild desires to have representatives in every city and town, and especially in mining regions, railroad centers, etc., so that in case of sudden and appalling disaster, like that in Johnstown, Pa., the work of relief may be intrusted to the care of members of the Guild, and speedy aid and comfort be thereby attained. It is a noble work, giving emphasis to the life of all medical men, who are so well known for charity the world over. Members of the Misericordia who are qualified practitioners of medicine are requested to offer their services to the clergymen of the parish in which they reside, to look after special cases, and at all times to be ready to give their services as the Church may have need of them; and also to take charge of any needy persons, not necessarily paupers, but such as may be unable to pay fees. When, through tempest, fire, famine, or pestilence, or from other causes, great suffering exists, the members of the Guild nearest to the afflicted community at once report to the proper authorities for duty, and notify, by telegraph or otherwise, the Provost of the Guild. Efforts will then be made at once to secure needed relief. There are no ceremonies in connection with the admission of brethren or associates. Suitable references are required from applicants, and these being satisfactory their names are added to the roll of members. The admission fee is one dollar and the yearly dues one dollar. Contributions to the general relief fund are urgently needed. For further information address W. Thornton Parker, M.D., Provost, P. O. Box 1405, Beverly, Mass.

The American Surgical Association will meet in Boston May 31, and June 1 and 2, 1892. The following preliminary program has been arranged:

Dr. John B. Roberts, of Philadelphia, will read a paper entitled "The Treatment of Uncomplicated Fractures of the Lower End of the Humerus and of the Base of the Radius;" Dr. John Homans, of Boston, a paper on "Fibroid Tumors of the Uterus;" Dr. W. T. Briggs, of Nashville, a paper entitled "Surgical Operations in Persons Suffering from Diseases Not Connected with That Necessitating the Operation, such as Chronic Malarial Poisoning, Diabetes, Organic Heart-disease, etc.;" Dr. N. P. Dandridge, of Cincinnati, a paper entitled "Surgery of the Tongue;" Dr. W. H. Carmalt, of New Haven, Conn., a paper entitled "Conditions Demanding Excision of the Globe of the Eye;" Dr. T. F. Prewitt, of St. Louis, a paper on "Ancient Contractures of the Hip- and Knee-joints;" Dr. A. T. Cabot, of Boston, a paper entitled "Report of Operations upon Spina Bifida and Encephalocele, with Remarks."

Dr. Cohen's Case of Excision of the Larynx.—We are informed that at the next meeting of the Philadelphia County Medical Society Dr. J. Solis-Cohen will exhibit a patient from whom he recently excised the larynx and first ring of the trachea, and that he will utilize the case in disproval of some recent theories as to the manner in which the air of respiration receives its moisture.

COMMUNICATIONS are invited from all parts of the world. Original articles contributed exclusively to THE MEDICAL NEWS will upon publication be liberally paid for, or 250 reprints will be furnished instead of payment, provided that the request for reprints be noted by the author at the top of the manuscript. When necessary to elucidate the text, illustrations will be provided without cost to the author.

Address the Editor: GEO. M. GOULD, M.D.,
1004 WALNUT STREET,
PHILADELPHIA.